

Users' Guide to the
Digital Topographic Data Base
(DTDB) of New Brunswick

DOCUMENT VERSION 1.1

NEW BRUNSWICK
GEOGRAPHIC INFORMATION CORPORATION

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ABOUT THIS GUIDE

Purpose

The purpose of this Guide is to provide an introduction to and a working knowledge of the New Brunswick Geographic Information Corporation (NBGIC) Digital Topographic Data Base (DTDB). The DTDB consists of two distinct map data base products: the Enhanced Topographic Base (ETB Data Base) and the Digital Terrain Model Data Base (DTM Data Base).

Scope

This Guide describes the structure and content of the DTDB files and provides guidelines for transferring data from NBGIC to users. *The Guide does not provide step-by-step procedures for using files in Computer Aided Design (CAD), map browser or Geographic Information Systems (GIS) applications.*

Audience

This Guide was prepared to assist those who wish to use digital topographic data within the Province of New Brunswick.

Pre-requisites

This Guide assumes the user has a basic knowledge of digital geographic data and how this data is stored within a CAD system (for example, AutoCad), map browser (for example, MapInfo) or GIS system (for example CARIS) to be used with the DTDB data. A knowledge of Relational Database Management Systems (RDBMS) and the data base design techniques used to store data within these systems is also assumed.

Some GIS software systems require special modules to manipulate and / or display DTM files. If you are unsure, please consult with your GIS vendor.

Versions of the ETB Data Base

The ETB Data Base will be updated over time to reflect changes to features contained within it. Each *version* of the ETB Data Base will be identified by a two-digit Version Number which represents the last two digits of the year in which the updates were made. For example, the version number for files last updated in 1996 is 96.

The current version of the ETB Data Base will be indicated as follows:

- the version number will be attached as a suffix to the data base product name in form ETByy (for example, ETB96 Data Base);
- the version number will be attached as a suffix to the file name extensions of the individual ETB Map Files and ETB Attribute Files:
 - Tyy for ETB Map Files;
 - Hyy for ETB Hydrographic Attribute Files; and
 - Ryy for ETB Road Attributes Files.

For ETB96 files, the file name extensions for the above files would be T96, H96 and R96, respectively.

Each version of the ETB Data Base will also be associated with a Specification Number which identifies the level of the structuring specification used to compile the data.

Current Version and Structuring Specification of the ETB Data Base

Version:	96 (last changes in 1996)
Specification:	3.3

Versions of the DTM Data Base

Structuring of the NBGIC DTM Data Base was completed in 1995. No additional updates to this data base are planned at this time.

Organization

The Guide is divided into nine sections and eight appendices.

Section 1 Installing the Digital Topographic Data Base

This section deals with the transfer of data from the supplied media to your computer. It provides a set of file naming conventions, lists the files you receive from the NBGIC and provides guidelines for transferring the data. It also provides a "checklist" to ensure that all data has been properly transferred.

Section 2 Contents of the ETB Map Files

This section deals with the contents and organization of the ETB Map Files. It defines terms needed to understand the contents and structure of the topographic

data, and describes the various sources from which the files were constructed. The section also tells how data is organized within the files, and provides more detailed information on the topologically structured layers. Current limitations of the files are also discussed.

Section 3 Contents of the ETB Attribute Files

This section deals with the contents and organization of the ETB Attribute Files. It defines terms needed to understand the contents and structure of these files, tells how information is organized within the files, and provides an overview of how the attribute files are linked to the map files.

Section 4 Working With the ETB Data Base

This section provides explanations and guidelines for working with your digital topographic data. It includes guidelines for enhancement of the files, integration of the digital topographic data base files with other datasets, and ongoing maintenance of the files.

Section 5 Contents of the DTM Map Files

This section deals with the contents and organization of the Digital Terrain Model (DTM) Map Files. It defines the terms, explains the format of the files which comprise the data base, and describes the presentation of the data.

Section 6 Working With the DTM Data Base

This section provides explanations and guidelines for working with Digital Terrain Model data.

Section 7 Ordering the Digital Topographic Data Base

This section describes how to order Digital Topographic Data Base files to suit your applications.

Section 8 Client Profile Form

This section contains the Client Profile Form and provides instructions on how to complete it.

Section 9 NBGIC Offices

This section lists the address and telephone number for each of the NBGIC Offices. The section also includes an order form for Digital Topographic Data Base Files.

Appendix A Frequently Asked Questions

This Appendix provides a list of common questions concerning the Digital Topographic Data Base along with responses to these questions.

Appendix B Feature Codes Used in the ETB Data Base

This Appendix presents a list of the valid Feature Codes which may be present within the ETB Data Base, along with a description and the topological status of each Feature.

Appendix C ETB Map File Information

This Appendix provides a list of ETB Map Files sorted by file name. Information is also included on the old ETB Map name, map geocode, date of photography, PDP versus VAX collection method, and level of structuring on non structured Themes.

Appendix D Dates of Photography

This Appendix shows the dates of photography used for the compilation of the ETB Data Base files on a provincial map overlay.

Appendix E PDP and VAX Compilation Areas

This Appendix shows the areas which were compiled using PDP and VAX methods on a provincial map overlay.

Appendix F Sample ETB Map File CARIS Header

This Appendix contains the listing for a representative ETB Map File CARIS Header.

Appendix G Assignment of Index Keys to Ramps

This Appendix contains the specifications used to assign feature index keys to ramps.

Appendix H Feature Codes Used to Define Areas of Exclusion in Digital Terrain Model Files

This appendix supplies a list of feature codes of digital topographic data used to form the boundaries of areas excluded from the collection of DTM points in the DTM Map Files.

Document References

This section contains a list of references which the user may find informative for more specific and detailed information concerning digital mapping, Geographic Information Systems, other NBGIC digital mapping products, and other topics discussed within this guide.

It should be noted that this list is not exhaustive. It rather represents a sample of reference materials which provide further insight into these topics.

1. *Technical Specifications for the Topological Structuring and Maintenance of the Digital Topographic Data Base: Specification 3.3*, New Brunswick Geographic Information Corporation, November 1995.
2. *Processing to Logical Consistency*, New Brunswick Geographic Information Corporation, March 1994.
3. *New Brunswick Land and Water Information Standards Manual: 1997 Edition*, New Brunswick Geographic Information Corporation, May 1994.

List of Acronyms

The following acronyms are used within this document.

ASCII	American Standard Code for Information Exchange.
ATS77	Average Terrestrial System, 1977
CAD	Computer Aided Drafting
CARIS	Computer Assisted Resource Information System
CARIS ASCII	A data interchange format used with the CARIS GIS software product. This format is used for ETB Data Base files distributed on CD-ROM.
CARIS NTX	A data interchange format used with the CARIS GIS software product.
CD-ROM	Compact Disk Read Only Memory
DPM	Digital Property Maps
DTM	Digital Terrain Model
DTDB	Digital Topographic Data Base

DXF	Digital Exchange Format, a data interchange format used by Map Browser and CAD system like AutoCAD
ETB	Enhanced Topographic Base
FMB	Forest Management Branch, Department of Natural Resources and Energy
FTP	File Transfer Protocol
GIS	Geographic Information System
GPS	Global Positioning System
NBDNR&E	New Brunswick Department of Natural Resources and Energy
NBDOT	New Brunswick Department of Transportation
NBGIC	New Brunswick Geographic Information Corporation
NTDB	National Topographic Data Base
PDP	An early series of computers manufactured by Digital Equipment Corporation
RDBMS	Relational Data Base Management System
SQL	Structured Query Language
VAX	A series of computers manufactured by Digital Equipment Corporation

Quick Facts

The following is a brief summary of the NBGIC Digital Topographic Data Base (DTDB) product.

Data Base Components	<p>The Digital Topographic Data Base consists of two distinct data bases and a common set of support files:</p> <ul style="list-style-type: none">• the <i>Enhanced Topographic Base (ETB) Data Base</i> contains two-dimensional (X,Y) topographic features and associated attributes.• the <i>Digital Terrain Model (DTM) Data Base</i> contains elevation data.
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- the *DTDB Support Files* contain support files which may be required by CARIS and other GIS users, a Provincial Index Map to the DTDB, DTDB user documentation in both English and French, Adobe Acrobat software, and various other support files.

ETB Data Base	<p>The ETB Data Base consists of:</p> <ul style="list-style-type: none"> <i>ETB Map Files</i> which contain spatial features. <i>ETB Attribute Files</i> which contain descriptive text for specific data features.
DTM Data Base	The Digital Terrain Model Data Base is a digital representation of elevations throughout the Province of New Brunswick, organized into individual DTM Map Files with the same 1:10 000 windows used for the ETB Data Base. There are no attribute files associated with these map files.
Coverage	The DTDB covers the entire Province of New Brunswick. There are 1893 individual ETB Map Files, each representing a 1:10 000 window encompassing 0.1 degree in longitude (7.5 kilometres) by 0.05 degree in latitude (5.5 kilometres). There are corresponding DTM Map Files for each of these windows.
Content	<p>ETB Map Files contain topographic features organized into nine general categories: Buildings, Designated Areas, Delimiters, Land Cover, Land Features, Transportation (Road/Railroad), Structures, Utilities and Hydrography.</p> <p>DTM Map Files contain elevation mass points, check points, and spot heights.</p>
Spatial Framework	<p>Datum: ATS77</p> <p>Projection: Stereographic Double</p> <p>Resolution (XY): 1.0 metre</p> <p>Resolution (Z): 0.1 metre</p> <p>Nominal Scale: 1:10 000</p> <p>Accuracy: ±2.5 metres for well defined features</p>
Logical Consistency	The Transportation and Hydrography Themes of the ETB Data Base have been structured to New Brunswick logical consistency standards. All other data is unstructured at this time.
Currency	The Transportation Themes of the ETB Data Base are current as of late 1995. All other data are current as of the date of the original photography from which they were derived.

Attributes	<p>Index keys are present for Transportation linear features and for Hydrography linear features and waterbody polygons within the ETB Data Base. NBGIC feature attribute files are available for these features.</p> <p>No other features currently have index keys.</p> <p>CARIS Source Identifier and Feature Code attributes are available for all map features.</p>
Availability	<p>Contact your local NBGIC office (see table 9-1) or download through the NBGIC Internet Browser (http://caris0.universal.ca/NBGIC).</p>
Media	<p>Provincial coverage for the Digital Topographic Data Base is distributed on CD-ROM. Users requiring a small number of DTDB files can download these files using the NBGIC Internet Browser service.</p> <p>Some other media formats can be supplied. Consult your local NBGIC office for details.</p>
Data Format	<p>DTDB Map Files are provided in CARIS ASCII and DXF formats. Contact your local NBGIC office for information on other possible formats.</p>

Section 1 Installing the DTDB Data Base

Introduction

This section deals with the transfer of data from the supplied media to your computer. It provides a set of file naming conventions, lists the files you receive from the NBGIC and provides guidelines for transferring the data. It also provides a "checklist" to ensure that all data has been properly transferred.

File Naming Conventions

In order to avoid confusion when referring to the various data products described within this Guide, the following naming conventions are used to ensure consistency in reference to specific data products and individual files comprising these products.

NBGIC Digital Data	Refers to the complete collection of digital data products available from the NBGIC, including the Digital Topographic Data Base (DTDB) and the Digital Property Map Data Base (DPM Data Base).
Digital Topographic Data Base (DTDB)	Refers to the complete collection of NBGIC digital topographic data base products. It includes the Digital Enhanced Topographic Base (ETB Data Base) and Digital Terrain Models (DTM Data Base).
Digital Enhanced Topographic Base (ETB Data Base)	Refers to the collection of digital files associated with the ETB Data Base product. It includes ETB Map Files and ETB Attribute Files.
ETB Map Files	Refers to the digital maps (graphic features) of the ETB Data Base. These files are organized into individual 1:10 000 map sheet windows and subdivided within each window by major thematic group.
ETB Attribute Files	Refers to the non-graphic attributes which describe individual ETB Map File features. At present there are two ETB Attribute Files: <ul style="list-style-type: none">• <i>Road Attribute Files</i> describe transportation (road / rail) linear features.• <i>Hydrographic Attribute Files</i> describe hydrographic linear features and waterbody polygons.

Digital Terrain Models (DTM Data Base)	Refers to the digital files of elevation data which are associated with the Digital Topographic Data Base. There is a corresponding DTM Map File for each ETB Map File.
DTDB Support Files	Refers to the files which are used by CARIS and AutoCAD to define individual DTDB Map File features and their display characteristics, as well as user documentation and other miscellaneous support files.
Digital Property Map Data Base (DPM Data Base)	Refers to the digital files associated with the NBGIC Digital Property Map Data Base product. This product includes DPM Map Files and DPM Attribute files.
DPM Map Files	Refers to the digital maps (graphic files) of the DPM Data Base. These files contain property parcel polygons which are identified by a unique parcel identifier (PID).
DPM Attribute Files	Refers to the non-graphic attributes which describe individual DPM Map File parcels through the PID.
	At present there are two DPM Attribute Files:
	<ul style="list-style-type: none"> • <i>Parcel Data</i> contains information concerning parcel ownership, size and documents registered against it; • <i>Assessment Data</i> contains information about assessment parcels and the PIDs associated with each assessment parcel.
NBDOT Road Inventory Data Base	Refers to the collection of digital map files maintained by the New Brunswick Department of Transportation (NBDOT) as an inventory of provincial roads.
NBDNR&E Forest Management Branch Data Base (FMB Data Base)	Refers to the collection of digital map files maintained by the New Brunswick Department of Natural Resources and Energy (NBDNR&E) as an inventory of forest management areas.

Figure 1-1 illustrates the hierarchy associated with the above file naming conventions.

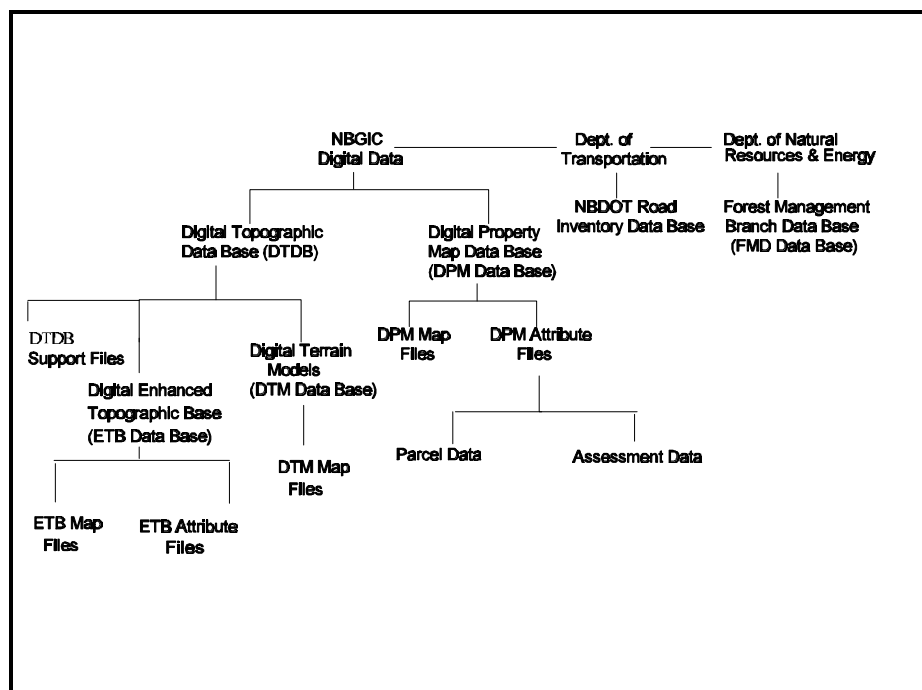


Figure 1-1: File Naming Conventions

Receiving the DTDB Data Base Map and Attribute Files

Media

If the entire provincial coverage of the DTDB Data Base is ordered, the NBGIC will normally provide your digital topographic data on CD-ROM. Under certain conditions, data may be provided on other media, such as:

- various tape media
- diskette (3.5", 1.44 Mb)
- file download from the NBGIC Internet Browser

For more information on the use of alternative media, refer to Section 7 of the Guide.

Data Format

DTDB Data Base files distributed on CD-ROM and through the Internet Browser will be provided in compressed (.zip) file format. Under certain conditions, and when alternate media is requested, files may be provided in alternate data formats. Refer to Section 7 of the Guide for further information concerning data format options.

Data provided	<p>You will receive <i>on the supplied media</i> a compressed (.zip) file for each 1:10 000 DTDB Map File window. Each .zip file will contain the following files:</p> <ul style="list-style-type: none"> • a CARIS ASCII 1:10 000 ETB Map File window, with filename in the form <i>filename.Tyy</i>, where <i>yy</i> is the <i>version</i> of the Map File. • an AutoCAD DXF 1:10 000 ETB Map File window, with filename in the form <i>filename.dxf</i>. • ETB Attribute Files for the transportation (.Ryy) features and hydrographic (.Hyy) features associated with each ETB Map File. • a CARIS ASCII 1:10 000 DTM Data Base Map File window corresponding to the ETB Map File window, with filename in the format <i>filename.DTM</i>. • an AutoCAD DXF 1:10 000 DTM Data Base Map File window, with filename in the format <i>filename.xyz</i>. 				
DTDB Map File Names	<p>Users of the Digital Topographic Data Base should note that commencing with version ETB96, <i>the naming convention for DTDB Map Files has been changed</i>. The new naming convention for DTDB Map Files is based upon the latitude and longitude (expressed in decimal degrees) of the South East corner of the window. These file names are coded as follows:</p> <p style="text-align: center;"><i>aaaabbbb</i></p> <p>where:</p> <table> <tr> <td><i>aaaa</i></td><td>is the North latitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree.</td></tr> <tr> <td><i>bbbb</i></td><td>is the West longitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree.</td></tr> </table> <p>As an example, the DTDB Map File name for the window having its SE corner at latitude 46° 00' 00" N (i.e., 46.00°)</p>	<i>aaaa</i>	is the North latitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree.	<i>bbbb</i>	is the West longitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree.
<i>aaaa</i>	is the North latitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree.				
<i>bbbb</i>	is the West longitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree.				

and longitude 66° 54' 00" E (i.e., 66.90°) is 46006690. For version ETB96, the corresponding ETB and DTM Map File names would therefore be as follows:

ETB Map File Name: 46006690.T96

DTM Map File Name: 46006690.DTM

Appendix C (ETB Map File Information) is organized by ETB Map File name. Users familiar with the former 7-character names for these files should note that these names are also included as a cross reference within this table.

Data Packaging

Data supplied on CD-ROM are packaged on two (2) CDs, with each CD containing a set of .zip files for a portion of the province:

- CD 1 contains all DTDB map windows south of latitude 46.5
- CD 2 contains all DTDB map windows north of latitude 46.5

The packaging of data supplied on other media may vary according to the media type and coverage area requested. A packing list will be supplied with each order indicating which files are contained on each individual media unit.

Note that, regardless of the media requested, the DTDB Support Files must be downloaded from the NBGIC Internet Browser site. Refer to Section 7 of this Guide for further information on how to download files using the NBGIC Internet Browser.

Receiving the DTDB Support Files

Media

Irrespective of the media on which the DTDB Map and Attribute Files are obtained, the DTDB Support Files must be downloaded using the NBGIC Internet Browser. Section 7 of this Guide contains specific instructions for accessing and using the Browser.

Data Format

DTDB Support Files are downloaded in compressed file (.zip) format. These files are divided into the following categories:

- *CARIS Support Files* - these files are required by CARIS GIS software. There are five (5) CARIS Support Files. They are as follows:

etb96tbl.zip Enhanced Topographic Base 1996 Colour table file (CARIS Format). This file controls the colour of map features. The extracted file name is etb96tbl.col.

etb96map.zip Enhanced Topographic Base 1996 Colour map file (CARIS Format). This file controls the hue, lightness and saturation of colours. The extracted file name is etb96map.cma.

etb96bin.zip Enhanced Topographic Base 1996 Symbol file (CARIS Binary Format). This file controls the display of symbols. The extracted file name is etb96sym.bin.

etb96dat.zip Enhanced Topographic Base 1996 Symbol file (CARIS ASCII Windows Format). This file controls the display of symbols. The extracted file name is etb96sym.dat.

etb96mas.zip Enhanced Topographic Base 1996 Master file (CARIS Format). This file is required to load the DTDB files in CARIS. The extracted file name is etb96mas.txt.

- *AutoCAD Support Files* - these files are required to properly symbolize DTDB map features in AutoCAD. The compressed archive file shape.zip contains the following two (2) files:

nbgin10.shx, nbgin10.shp

Note that the above file names are not consistent with the naming conventions adopted for all other DTDB support files, which are prefixed by "etb96". This has been done as a temporary measure because the batch file used to create the AutoCad format assumed that the AutoCad support files would be called nbgin10.shx and nbgin10.shp. These files will be renamed in later DTDB releases.

- *Information Files* - these include the Users' Guide and distribution agreement for the Digital Topographic Data Base in English.

etb96uge.zip Enhanced Topographic Base 1996 User
Guide in the English language (Adobe
Acrobat Format). The extracted file name is
etb96uge.pdf.

etb96agr.zip Enhanced Topographic Base 1996 and
Digital Terrain Model distribution agreement
(Adobe Acrobat format). The extracted file
name is etb96agr.pdf.

- *Map Index Files* - these are Provincial Map Index files containing the DTDB 1:10 000, 1:50 000 and 1:250 000 windows in CARIS ASCII, DXF and PRN formats. The compressed archive file index96.zip contains the following index files:

etb96xrf.zip Enhanced Topographic Base 1996 cross-
reference of old file names and new file
names (ASCII format). The extracted file
name is etb96xrf.asc.

etb96inx.t96 Enhanced Topographic Base 1996 index of
the province - It shows the 1:250 000
windows, the 1:250 000 map numbers, 1:50
000 windows, the 1:50 000 map numbers,
the 1:10 000 windows, the 1:10 000 old and
new file names, the county boundaries and
the outline of the province (CARIS format).

etb96inx.prn Enhanced Topographic Base 1996 index of
the province - It shows the 1:250 000
windows, the 1:250 000 map numbers, 1:50
000 windows, the 1:50 000 map numbers,
the 1:10 000 windows, the 1:10 000 new file
names, the county boundaries and the outline
of the province (HP DesignJet 750C Plus or
compatible format).

etb96inx.dxf Enhanced Topographic Base 1996 index of the province - It shows the 1:250 000 windows, the 1:250 000 map numbers, 1:50 000 windows, the 1:50 000 map numbers, the 1:10 000 windows, the 1:10 000 old and new file names, the county boundaries and the outline of the province (AutoCad format).

Guidelines for Installing DTDB Map Files

Hints

If individual map sheet windows are requested or the DTDB Data Base is ordered on media other than CD-ROM or through the NBGIC Internet Browser, perform a directory check of the media to ensure that all files are present.

Create a temporary directory on your system for the files being transferred from the supplied media. Move the files to their permanent directory once the data transfer is successfully completed.

It is recommended that a tape backup of the data directory be made once the files have been successfully loaded and prepared for use with your GIS or CAD software.

The time to install the files will vary according to the number of files you have ordered and the capacity of your computer.

Be familiar with how your GIS software imports geographical data.

If your needs for DTDB Map Files are for occasional project area use, you may wish to load and process these files directly from CD-ROM as they are needed in order to conserve online disk storage requirements.

Disk Storage Requirements

There are 1893 DTDB map windows which cover the entire Province of New Brunswick. The ETB Map Files in CARIS ASCII format in total will require approximately 1.05 Gb of disk storage. Typical storage requirements for individual files ranges from 0.4 Mb to 2.3 Mb.

The DTM Map Files in CARIS ASCII format in total require approximately 0.45 Gb of disk storage. A typical file size for a DTM Map File is 0.37 Mb.

Support Files

In addition to the actual ETB and DTM Map Files, there are also support files which should be copied to your system. The specific files to be copied depend on which GIS or CAD system you intend to use. Refer to the section *Guidelines for Installing DTDB Support Files* for instructions on which files are to be copied for the most common software packages.

For CARIS Users

CARIS users should be aware that the CARIS ASCII files loaded must be processed by the CARIS utility program REFOASCI before they can be used for analysis, and that the *full filename* (including extension) of each ETB Map File to be processed must be given as the FILE argument to REFOASCI.

For Other GIS Users

Users of other GIS software should be aware that translation from CARIS ASCII to the data format required by their GIS software must be completed before the files can be used for analysis. If no direct translator exists, it may be advisable to obtain the data in DXF format, or consult with NBGIC regarding other possible delivery formats which might be provided.

For AutoCAD Users

AutoCAD users should request the digital files in DXF format.

Guidelines for Installing ETB Attribute Files

This section provides instructions for installing the ETB Attribute Files supplied with the ETB Data Base.

Road Attribute Files

There will be one Road Attribute File present for each of the ETB Map Files supplied. These files will have a name in the format *filename.Ryy*, where *filename* is the name of the individual map file.

Example: 4600690.R96

Hydrographic Attribute Files

There will be one Hydrographic Attribute File present for each of the ETB Map Files supplied. These files will have a name in the format *filename.Hyy*.

Example: 46006690.H96

Hints

If individual map sheet windows are requested or the DTDB Data Base is ordered on media other than CD-ROM or through the NBGIC Internet Browser, perform a directory check of the media to ensure that all files are present.

Create a temporary directory on your system for the files being transferred from the supplied media. Move the files to their permanent directory once the data transfer is successfully completed.

The time required to install the files will vary according to the number of files ordered and the capacity of your computer.

It is advisable to make a tape backup of the data directory once the files have been successfully loaded and prepared for use with your system RDBMS software.

You will need to be familiar with how your data base software imports ASCII text files in order to prepare this data for GIS use.

If your needs for ETB Attribute Files are for occasional project area use, you may wish to load and process these files directly from the supplied media as they are needed in order to conserve online disk storage requirements.

For UNIX Users

UNIX users who wish to load the ETB Data Base Attribute Files should be aware that these files are stored on the supplied media in DOS ASCII format. These files will need to be translated to UNIX ASCII format either by using FTP or via a utility program such as DOS2UNIX.

Disk Storage Requirements

The ETB Attribute Files are stored on CD-ROM in ASCII format. The approximate disk space required to load all of these files for the provincial coverage is approximately 100 Mb.

Guidelines for Installing DTDB Support Files

Hints

The DTDB Support Files must be obtained through the NBGIC Internet Browser regardless of the media format requested.

Support files should be copied to a specific support directory on your system and then copied from this directory to the software support directory. This will ensure that a copy of these files is maintained on your system in the event that installation of a subsequent release of your GIS software overwrites these files in the GIS support directory.

You should be familiar with how your GIS and/or CAD software expects to interface with these files.

For all Users

All DTDB users should download the following files from the DTDB Support Files page of the Internet Browser to disk:

- the user guide documentation (etb96uge.zip) from the *Information* section.
- the cross reference of old file names and new file names (etb96xrf.zip) from the *Information* section.
- the distribution agreement information (etb96agr.zip) from the *Information* section.
- the Provincial Index Map (index96.zip) from the *Map Index* section.

Users who do not currently possess a copy of the Adobe Acrobat Reader software program should also download this program to disk. It is required to read and/or print the DTDB Users' Guide and any other files with a .PDF extension.

Users who do not currently possess either WINZIP or PKZIP data compression software should download the PKZIP utility program. It is required to uncompress .zip files transferred by the Internet Browser.

For CARIS Users

CARIS users should download the following DTDB Support Files from the *CARIS Format* section to disk:

- ETByyMAS.ZIP, which contains the CARIS Master File associated with the map datasets.
- ETByyDAT.ZIP, which contains the CARIS Symbol File (in ASCII text format) associated with the map datasets.

- ETByyBIN.ZIP, which contains the CARIS Symbol File (in CARIS Binary Format) associated with the map datasets.
- ETByyTBL.ZIP, which contains the CARIS Colour Table File associated with the map datasets.
- ETByyMAP.ZIP, which contains the CARIS Colour Map File associated with the map datasets.

Note that, the CARIS utility program BUILSYMB must be run against the file ETByySYM.DAT to create a binary version of the symbol file.

CARIS users should also download the following file from the *Map Index* section to disk:

INDEXyy.ZIP - the current index map of the province in CARIS, DXF and PRN formats.

For AutoCAD Users

AutoCAD users should download the file SHAPE.ZIP to their shape file directory from the *AutoCAD Format* section. This file contains custom shapes for features within the ETB Map Files.

For Other GIS Users

Users who wish to process the Digital Topographic Data Base with GIS software other than CARIS should be aware that there are no custom support files provided for other GIS packages. Users in this category may wish to download the AutoCAD Shape File SHAPE.ZIP to disk from the *AutoCAD Format* section, and the index file INDEXyy.ZIP from the *Map Index* section.

Notes on Installation

Recommendation	<p>If you will be reformatting the data you should read about Digital Interchange Formats, Chapter 8 in the <i>Land and Water Standards Manual</i>. It discusses problems which may be encountered when transferring data between platforms and operating systems. The chapter also provides a list of resource persons who may be contacted for assistance.</p> <p>The <i>Land and Water Standards Manual</i> may be acquired from the NBGIC. Contact the NBGIC at 506-457-7308.</p>
CARIS ASCII to DXF Translation	<p>In transferring from CARIS ASCII to DXF, the Source IDs and Theme numbers will be lost. Each CARIS feature code becomes a layer.</p> <p>CARIS DXF translation generates text as an AutoCAD ALIGNED text type. This can result in improper positioning of polygon display labels.</p>
Linking to Attribute Files	<p>The ETB Map Files contain feature index keys for all Road and Hydrography linear network features, and for Hydrography waterbody polygons. These keys are used to link the Road and Hydrographic Attribute Files to the maps. These keys will be present in CARIS files created from ASCII files. They will <i>not</i> be present if the files are received in DXF format.</p>
Use of Consistent RDBMS Field Names	<p>ETB Attribute Files are supplied for both the Road and Hydrography layers of the ETB Map Files. Within these files, a number of data elements exist which are common to both (for example, index key, ETB Feature Code, Source ID, etc.). It is recommended that standard field names be used when creating data base table definitions for ETB Attribute Files (for example, the name SOURCE_ID could be used for the ETB Source ID in all tables).</p>

Verifying the Installation

Checking DTDB Map Files	Display one of the ETB and/or DTM Map Files using your GIS software. If the graphics fail to display, check that:
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- the format is correct
- the translation from one format to another has been done correctly

Checking DTDB Support Files

Display one of the ETB and/or DTM Map Files using your GIS software. Verify that multiple colours are displayed to represent different feature classes (for example, water features should be blue). Also, verify that text is correctly displayed and that special symbols are present and drawn properly.

Note that these checks are only applicable at present for CARIS and AutoCAD users.

Section 2 Contents of the ETB Map Files

Introduction

This section deals with the contents and organization of the ETB Map Files. It defines terms needed to understand the contents and structure of the topographic data, and describes the various sources from which the files were constructed. The section also tells how data is organized within the files, and provides more detailed information on the topologically structured layers. Current limitations of the files are also discussed.

Current Version	The current version of the ETB Data Base has been built according to Specification Level 3.3 (1996). These files are often referred to as <i>ETB96</i> files.
Future Versions	Future revisions to the ETB Data Base are planned. These subsequent versions will reflect changes made to map features and may incorporate additional topological structuring on individual map themes. New version numbers will be assigned to future versions of the ETB Data Base.

Definitions

There are a number of terms which are used within this section to describe the content of the ETB Data Base. Definitions of these terms are given below.

Digital Topographic Map	<p>A computer generated map file which represents map features in terms of digital numeric coordinate values (for example, X, Y, and Z coordinates). These coordinates are used to define points, lines and polygons, which are the three categories of map features that may be present. Map Features may be stored using either two-dimensional (X,Y) or three-dimensional (X,Y,Z) coordinates.</p> <p>Topographic maps contain information about the land and its cultural characteristics, including drainage, transportation systems, vegetation, structures and land use. ETB Map Files are digital topographic maps.</p>
CARIS	<p>A GIS software package which is marketed by Universal Systems Ltd. of Fredericton, NB. CARIS is the standard GIS software package for the NBGIC and other provincial government agencies within the Province of New Brunswick.</p>

AutoCAD	A Computer Assisted Drafting (CAD) package marketed by Autodesk.
Feature Code	A CARIS attribute which is used to describe characteristics of a map feature. Feature Codes may be up to 12 characters in length.
Theme/User Number	A CARIS numeric attribute which is used to group similar map features within a digital map file. A CARIS Theme/User Number is analogous to a layer within other GIS and CAD packages.
Source ID	A CARIS attribute which is used to describe the data source associated with each digital map feature. Source ID's may be up to 12 characters in length.
Index Key	A CARIS attribute which is normally used to cross reference map features to associated RDBMS attribute files. Index keys may be up to 12 characters in length.
Map Window	The geographic area encompassed by one digital map file.
Edge Matching	A digital map editing procedure which aligns individual map features along the common edges of adjoining sheets.
Logical Consistency	The rules which define the relationships among the individual features present within a digital map file.
Topological Structuring	The editing process which is used to remove errors and/or inconsistencies present within a digital map file, group associated features into common themes or layers, code feature attributes, edge match adjoining map files, and other such operations which are designed to structure map data according to a defined standard.
Attributes	Data fields or items which are used to describe individual map features. Attributes may either be directly associated with map features by the GIS software (for example, the Source ID and Feature Code in CARIS) or linked to map features from a data base table using an index key.
Network Topology	Relationships between connected linear and point features, stored in a GIS, which enable the software to represent a real world linear network entity such as a river system.

Polygon Topology	Relationships between connected linear features and associated textual labels, stored in a GIS, which enable the software to represent a real world area feature such as a lake.
Co-location	Linear or Polygon Features are said to be co-located when two or more of these Features share a common boundary along some or all of their length, and this common boundary is duplicated within each Feature to maintain the integrity of the Feature.

Data Sources for the ETB Data Base

There are a number of data sources which have been used to compile the current (1996) Enhanced Topographic Base (ETB Data Base). The ETB Data Base is one of two digital products associated with the New Brunswick Digital Topographic Data Base (DTDB). It contains two dimensional (X,Y) planimetric features describing natural and human-made features.

The second DTDB digital product is the Digital Terrain Model (DTM) Data Base which contains elevation data collected for the whole of New Brunswick. The DTM Data Base is further described within Sections 5 and 6 of this Guide.

Original Source

The original ETB Map Files were collected from aerial photography using classical photogrammetric techniques during the period 1982 to 1993. This data collection was carried out as part of the Maritime Provinces Land Registration and Information Services (LRIS) program under the direction of the Council of Maritime Premiers.

Additional Sources

ETB Map Files contain data from a number of additional sources which are described below.

NBDOT	Road network features and associated road text within the Transportation Theme have been updated from the New Brunswick Department of Transportation (NBDOT) digital Road Inventory Data Base files. These files were created from original NBGIC ETB Map Files and subsequently updated by NBDOT to reflect changes in roadway alignment and/or classification which have occurred on roads under their jurisdiction.
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NBDNR&E	Resource road features within the Transportation Theme have been updated from data supplied by the New Brunswick Department of Natural Resources and Energy (NBDNR&E). This data was compiled from aerial photography for use in the Forest Management Branch (FMB) Data Base.				
NBGIC DPM	The NBGIC Digital Property Map (DPM) Data Base was used to overlay road property corridors within municipal boundaries on the road network features present within the ETB Map Files. Where corridors existed without corresponding ETB Map File centerlines, new road centerlines were created by interpolation within these corridors.				
Other	<p>Six of the original ETB Map Files were compiled from a combination of property maps, 1:50 000 NTS maps and 1976 1:10 000 aerial photography.</p> <p>These files are known as the Wolves maps and the Machias Seal Island maps, and are listed as having a Processing Level of CMB in Appendix C. The Wolves are three islands located in the Bay of Fundy East of Campobello Island and North of Grand Manan Island. The Machias Seal Island files are also in this area. Aerial photography for these islands was not collected as part of the original LRIS digital topographic mapping program.</p> <p>The following map windows correspond to each of these areas:</p> <table><tr><td>Wolves</td><td>44906670, 44956660, 44956670</td></tr><tr><td>Machias Seal Island</td><td>44456710, 44506700, 44506710</td></tr></table>	Wolves	44906670, 44956660, 44956670	Machias Seal Island	44456710, 44506700, 44506710
Wolves	44906670, 44956660, 44956670				
Machias Seal Island	44456710, 44506700, 44506710				

Typical File Sizes

Typical file sizes for an individual ETB Map File (one - 1:10 000 spatial window) containing all Features (.T96) may range from 0.4 Mb to 2.3 Mb. These file sizes are associated with the CARIS ASCII format. Total size for the 1893 ETB Map Files covering the Province of New Brunswick is approximately 1.05 Gb.

CARIS Edit File versions of the ETB Map Files (as created by the REFOASCI utility) will typically be equivalent in size to the CARIS ASCII files.

Files supplied in AutoCAD DXF format will typically be at least two times larger than the corresponding CARIS ASCII format file.

About the ETB Map Files

Map Projection	The map projection for the ETB Map Files is the New Brunswick Stereographic Double Projection.
Reference Ellipsoid	The reference ellipsoid for all data is the Average Terrestrial System, 1977 (ATS77).
Coordinate Resolution	Coordinates associated with individual features within the ETB Map Files are recorded as X,Y values to the nearest 1.0 metre.
Elevations	Elevations are not present within the ETB Map Files.
Technical Reference	For more technical information concerning the ETB spatial framework, refer to Chapter 4 of the <i>New Brunswick Land and Water Information Standards Manual</i> . A sample CARIS Header File is contained within Appendix F of this guide.

Accuracy and Scale

Accuracy	The accuracy statement for the 1:10 000 ETB Data Base is that 90 percent of all well defined features must fall within ± 2.5 metres of their true ground position. Well defined features are those whose positional accuracy is not adversely affected by vegetative cover.
Nominal Scale	The nominal scale of the ETB Map Files (the scale at which hardcopy maps are produced) is 1:10 000.

Currency

Features	Features on the Transportation Theme have been updated to reflect late 1995 conditions as contained in the NBDOT Road Inventory Data Base, the NBDNR&E Forest Management Branch Data Base and the NBGIC Digital Property Maps. All other features are current as of the date of the aerial photography from which they have been compiled. The Source Identifier attribute contains information on the currency of individual features.
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Photography Dates Appendix E indicates, on a provincial overview map, the photography dates for the ETB Map Files. These dates are also given on an individual file basis within Appendix C.

Spatial Extent

Map Window Each ETB Map File covers a geographic area encompassed by a spatial map window extending 0.1 degree in longitude (7.5 kilometres) and 0.05 degree in latitude (5.5 kilometres).

Themes

Thematic Groups Features within ETB Map Files are organized into major thematic groups. Table 2-1 summarizes these Theme groupings.

Table 2-1: ETB Map File Themes				
THEME NUMBER	THEME NAME	STRUCTURED	TOPOLOGY	INDEX KEYS
100	Road/Rail Network	YES	Network	YES
110	Road/Rail Associated	YES		NO
200	Map Surround and Text	NO		NO
210	Delimiters	NO		NO
220	Land Cover/Land Form	NO		NO
230	Utilities	NO		NO
240	Buildings	NO		NO
250	Designated Areas	NO		NO
260	Structures	NO		NO
300	Hydrography	YES	Polygon	YES
310	Hydrography Spines	YES	Network	YES
320	Associated Hydrography	YES		NO

Structured and Non Structured Themes

Structured Themes A thematic group which has been fully processed in order to comply with the logical consistency standards contained within the New Brunswick Land and Water Information Standards Manual (see Chapter 4, pages 4-24 to 4-31 for a

detailed description of these standards) is referred to as being a *structured Theme*.

Characteristics of structured Themes include:

- all line features have clean intersections (i.e., no overshoots or undershoots);
- all polygon features are closed;
- where linear and/or polygon features share a common boundary, co-location of features is normally used to maintain consistency within each feature class. Note that there are exceptions to this general rule (for example, water bodies are *not* co-located with swamps). In this latter case, a single line will represent the boundary of both features.
- features are edge matched to ensure connectivity across map sheet boundaries;
- area features spanning more than one map sheet are closed at the neat line with virtual features along the neat line;
- all linear features are assigned index keys; and
- all polygon features are indexed using the polygon label as an index key.

Figures 2-1 through 2-5 illustrate the above concepts. Refer to the section on Logical Consistency for further information on data structuring.

The structured themes within ETB Map Files are indicated within Table 2-1.

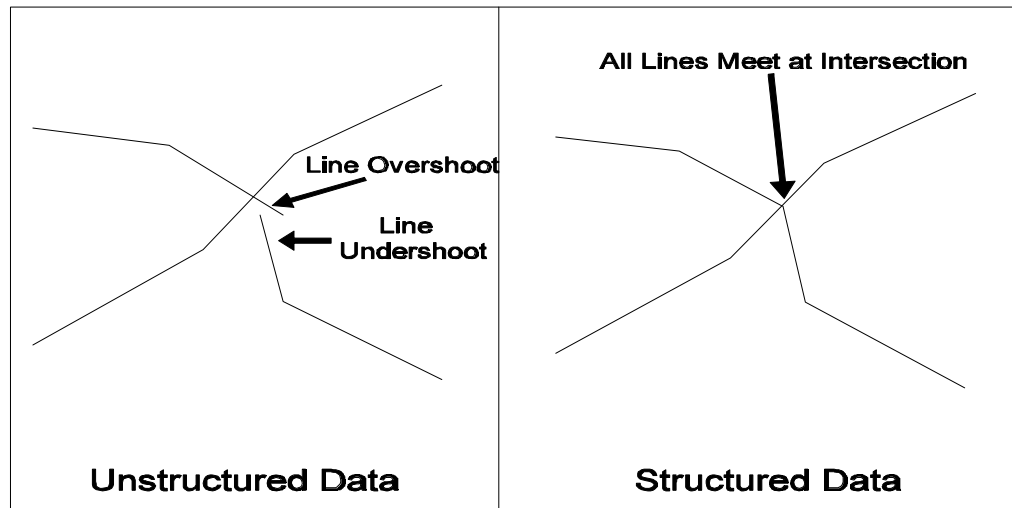


Figure 2-1: Clean Line Intersections

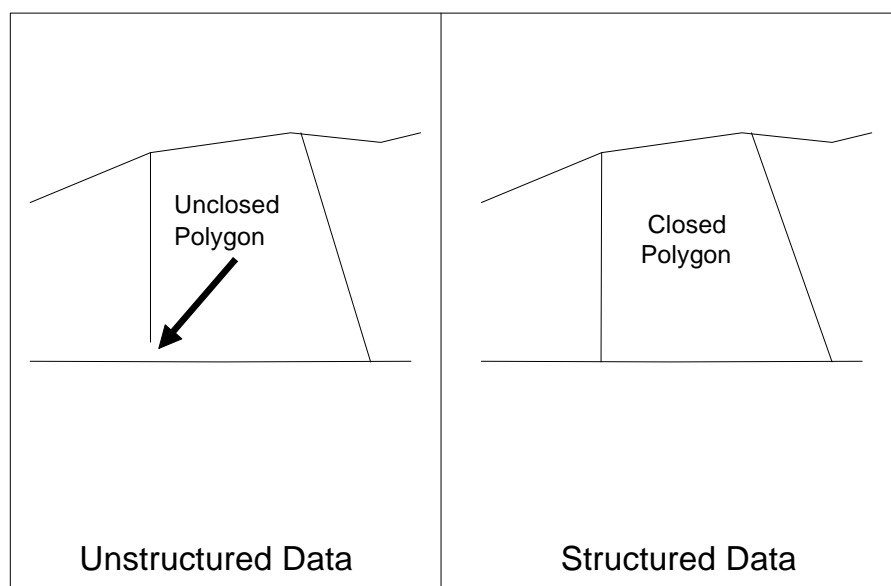


Figure 2-2: Closing of Polygon Features

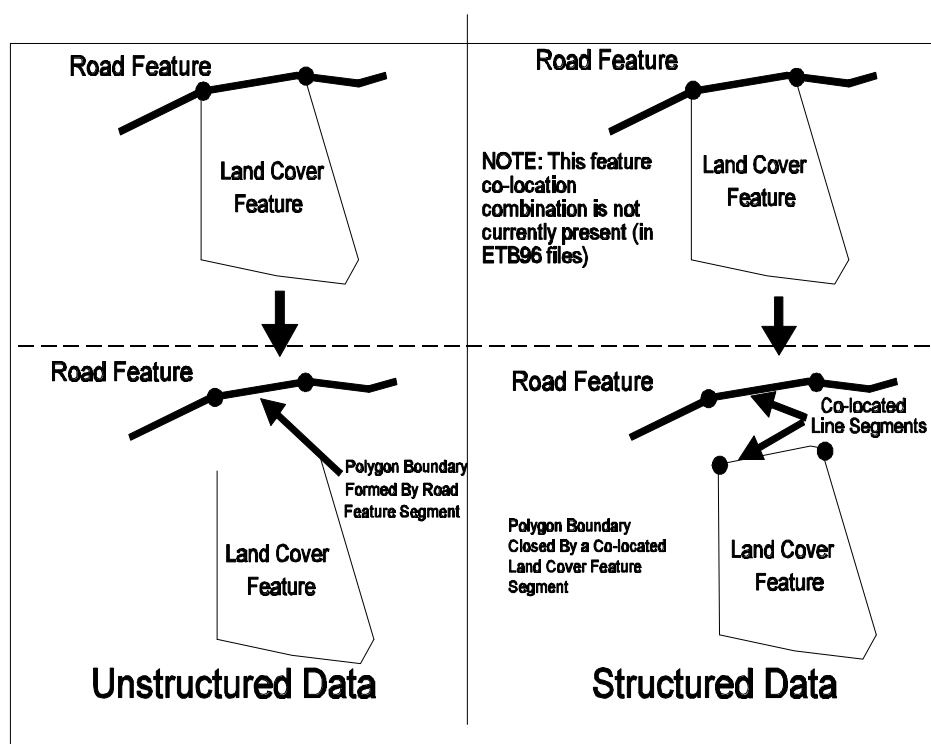


Figure 2-3: Co-location of Features

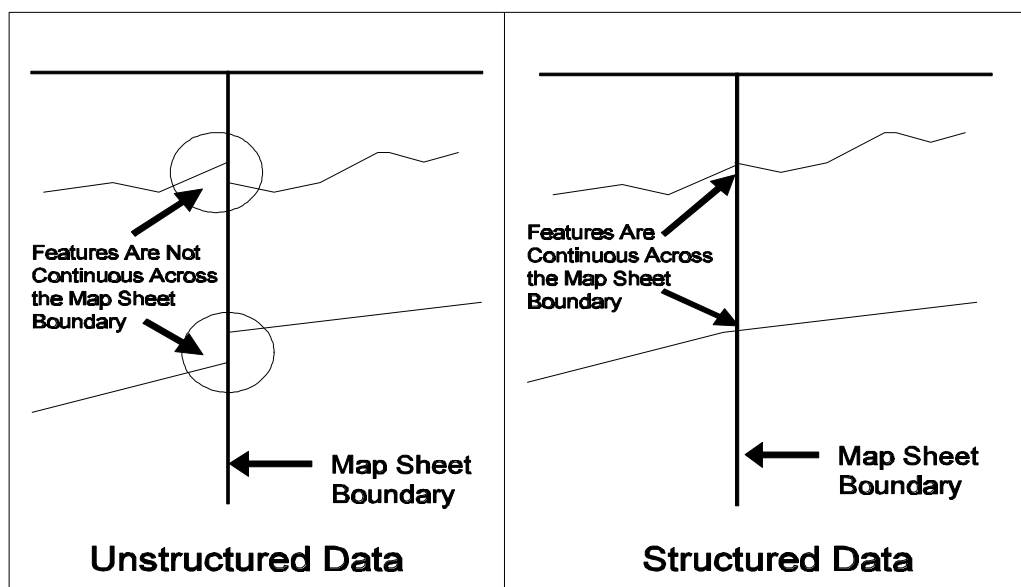


Figure 2-4: Edge Matching

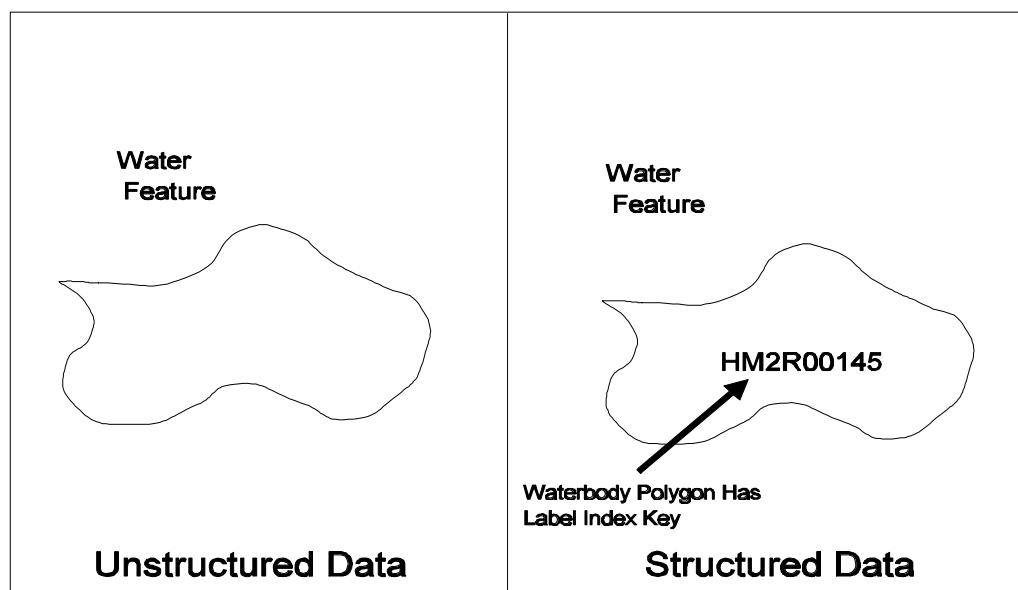


Figure 2-5: Polygon Labels

Non-structured Themes Themes which have not been processed to logical consistency standards are referred to as *non-structured themes*.

Source Identifier

Definition The Source Identifier or Source ID is a CARIS software feature attribute. A Source ID is an alphanumeric code up to 12 characters in length, used to indicate the source of data or other information pertinent to the data.

Contents There are established conventions for the coding of Source IDs within structured Themes of the ETB Map Files. By reading the Source ID you will be able to determine:

- the source of the data comprising the feature;
- the method of original data capture;
- the expected accuracy of the data;
- the organization which edited the data; and
- the year the data was captured.

Format Source IDs are coded according to the following convention:

AABCDEEEFFFF

where:

AA	is a code describing the source of the data as defined within Table 2-2.
BC	is a code describing the method of data capture as defined with Table 2-3.
D	is a code describing the expected accuracy of the data as defined within Table 2-4.
EEE	is a code describing the organization which entered the data as defined within Table 2-5.
FFFF	is the year the data was surveyed or flown.

TABLE 2-2: DATA SOURCE CODES	
CODE	DESCRIPTION
AA	Contractor (defined in Table 2-5)
D1	NBDOT (all Themes except 2050)
D2	NBDOT (Theme 2050)
DN	NBDNR&E
GI	NBGIC Digital Property Maps
LR	LRIS (original ETB data)
MN	Municipalities
ZZ	Unknown

TABLE 2-3: METHOD OF DATA CAPTURE	
CODE	DESCRIPTION
AM	Other Methods/Aerial Photography
AS	Stereo Compilation/Aerial
CT	Coordinate Transfer/Compute Other
HS	Hard Copy/Scanning
HV	Hard Copy/Vector Digitizing
RS	Digital Data/Remote Sensors
SG	Field Survey/GPS
SM	Field Survey/Other Methods
ST	Field Survey/Total Stations
VD	Video Terminal/Heads Up Digitizing
ZZ	Unknown

TABLE 2-4: EXPECTED ACCURACY

CODE	DESCRIPTION
A	less than 1 metre
B	1 - 3 metres
C	3 - 5 metres
D	5 - 10 metres
E	10 - 15 metres
F	15 - 20 metres
G	greater than 20 metres
Z	Unknown

TABLE 2-5: EDITING ORGANIZATIONS

CODE	DESCRIPTION
ADI	ADI Limited
CSL	CAD/CAM Systems Limited
DOT	NBDOT
EGC	The Eastcan Group
GAL	Godfrey Associates Limited
GEO	Geoplan Consultants Inc.
GIC	NBGIC
GSL	Geomacadie Services Limited
HSL	Hughes Surveys & Consultants
KSL	Key Surveys Limited
OPX	Optex Inc.
TCA	Thompson Conn & Associates
ZZZ	Unknown

Anomalies

Unknown descriptions in any of the Source ID subfields are coded as Z characters.

The year subfield could be coded as 19ZZ or ZZZZ, depending upon the source of the data.

Note

For ETB96 Map Files, only the editing organization codes GEO and OPX will be present.

Feature Code

Definition	A Feature Code is a CARIS software feature attribute consisting of an alphanumeric code of up to 12 characters used to classify or describe each feature within the ETB Map Files.	
Contents	There are established conventions for the coding of topographic features. By reading the Feature Code you will be able to determine <ul style="list-style-type: none">• the classification of the feature• certain attributes of the feature	
Format	A Feature Code is in the form <i>XXXXnn</i> , where	
	<i>XXXX</i>	is a variable length text code describing the type of feature
	<i>nn</i>	is an <i>optional</i> Feature code qualifier of one or two digits providing further attributes of the feature
Feature Types (<i>XXXX</i>)	Table 2-6 describes the general codes used for feature types. The asterisk following the code indicates that a further break-down may exist. For details on each Feature Code consult Appendix B.	

TABLE 2-6: FEATURE CODE CLASSIFICATIONS AND DESCRIPTIONS

Code	Refers to
BL*	Buildings to scale and symbolized buildings
DA*	Designated area features such as drive in theatres, quarries, golf courses, etc.
DL*	Delimiters or boundaries such as municipal, county, or interprovincial boundaries. It also includes certain cartographic details such as grid lines, neat lines, etc.
LC*	Land cover, both natural and cultivated. It includes forested areas, orchards, reforested areas, etc.
LF*	Hypsographic features such as spot heights
RRRR*	Railroad features
RRRD*	Road features
ST*	Structures, such as locks, chimneys, grandstands, etc.
UT*	Utilities such as transmission lines, pipelines, etc
WA*	Includes all water and water related features

Feature code qualifiers

A Feature Code may optionally have a suffix consisting of either 1 or 2 numeric digits. The first number immediately following the text code (for example DAAP) provides more information about the features. The second number further qualifies the feature. Table 2-7 lists the first set of qualifiers and Table 2-8 the second.

TABLE 2-7: PRIMARY FEATURE CODE QUALIFIERS	
Number	Means...
0 or blank	Regular feature. If blank, no secondary qualifier will be present.
1	Feature is to the left of the line. This is used only for area features.
2	Feature is to the right of the line. This is used only for area features.
3	Text feature
4	The feature is displayed using parallel lines. The parallel lines can be viewed when the data is symbolized.
5	Hard surface road of more than 2 lanes
6	Hard surface road of two lanes
7	Hard surface road of less than 2 lanes
8	Loose surface road of 2 lanes or more
9	Loose surface road less than 2 lanes

TABLE 2-8: SECONDARY FEATURE CODE QUALIFIERS	
Number	Means...
0	A regular feature
1	Paved feature
2	Unpaved feature
3	Feature under construction
4	Ruin / Inactive / Abandoned feature
5	Indefinite / Approximate feature
6	Underground feature
7	Overhead feature
8	Proposed location
9	Road text feature

Examples

The following are examples of Feature Codes:

DAQU10

Quarry which is to the left of the DAQU arc

DAPA11

This describes a parking area which is paved and to the left of the arc.

Logical Consistency

The ETB specification (ETB Level 3.3) dictates that the Transportation and Hydrography Themes be structured to the logical consistency standards described within the New Brunswick Land and Water Information Standards Manual (Chapter 4). The characteristics of structured Themes have been previously summarized. The individual components of the logical consistency standard are described below.

Clean Data

All map data is free from any spatial inconsistencies such as line gaps or overshoots and area misclosures.

Connection

Lines having a connection relationship will have identical XY end point coordinates at the point of intersection. Note that intersections are formed in two dimensional space, since features do not contain elevations. Thus intersections will occur at overpasses and underpasses on the transportation layer. Figure 2-6 illustrates the connection relationship.

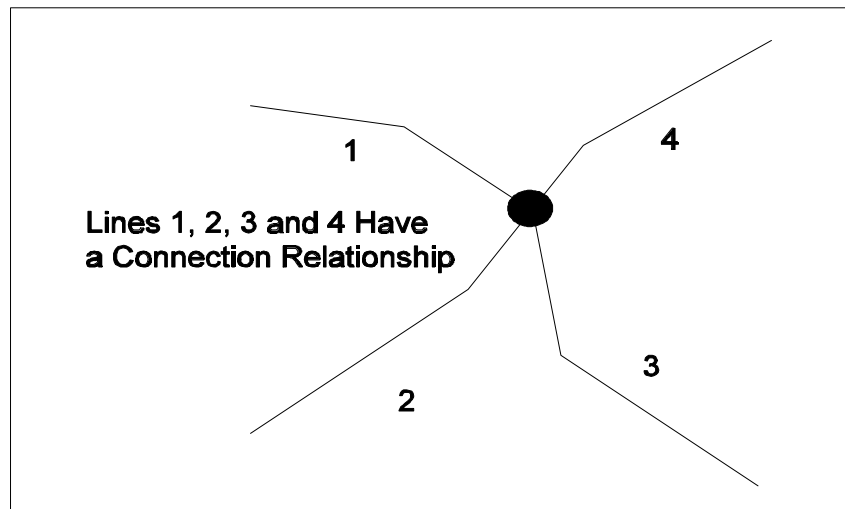


Figure 2-6: Connection Relationship

Co-location

Lines having a co-location relationship will have identical coordinates (end points and intermediate shape points) in two dimensional coordinate space.

Co-location is normally used to ensure that area features may be entirely represented within their own feature class. Figure 2-3 illustrates the co-location relationship. It should be noted that no co-location of features is present within the structured Themes of the current (ETB96) version of the ETB Data Base.

Segmentation

Linear features within ETB Map File structured themes will normally be continuous and unbroken. Segmentation of linear features is permitted under the following conditions:

- where a change in the CARIS attribute (Source ID, Feature Code or Index Key) occurs;
- where a connection relationship exists at an intersection with another linear feature;
- where a co-location relationship exists at the end points of the co-located line segments.

Figure 2-7 illustrates the allowable segmentation conditions.

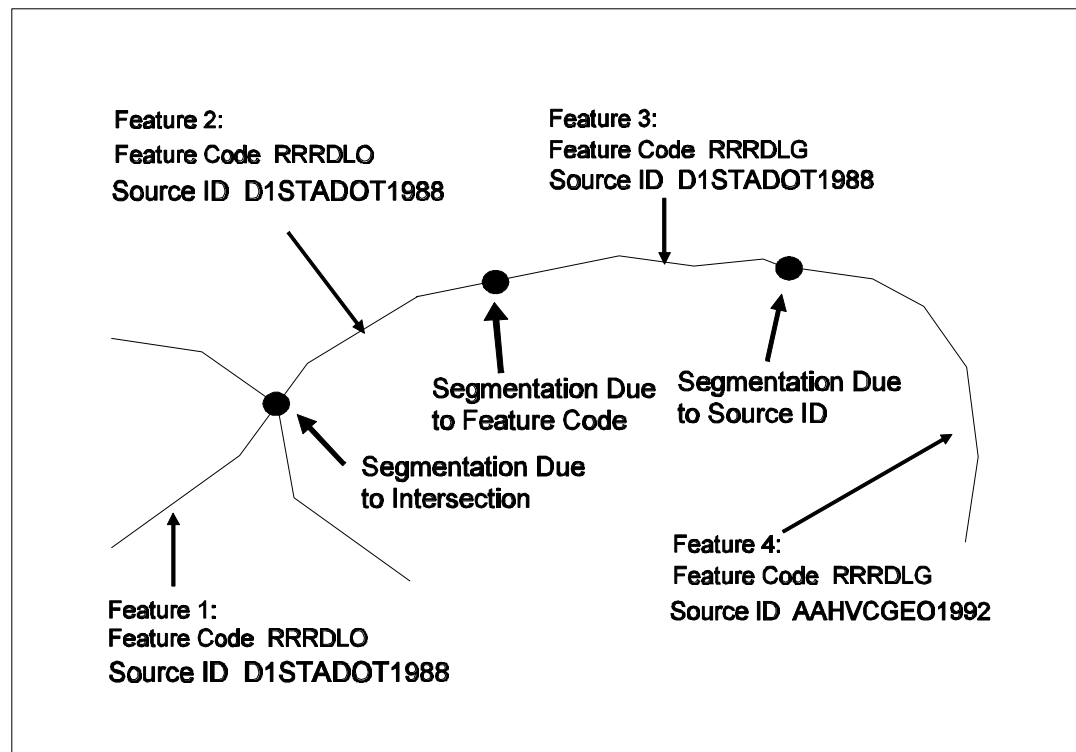


Figure 2-7: Allowable Segmentation Conditions

Closure of Area Features

Each Theme within an ETB Map File which contains area and/or linear features is enclosed by a neat line at the map sheet boundary. Thematic neat lines will be given a Feature Code of **DLNLnnn**, where *nnn* is the Theme Number involved (for example, the neat line for Theme 100 will have a Feature Code of **DLNL100**). Within structured Themes, area features will be closed by virtual lines which represent a segmented portion of the Theme neat line. These virtual lines will have a Feature Code of the area feature to be closed, appended with the characters **__V**. Virtual lines will *not* be co-located with the neat line. Rather, those portions of the neat line which close area features will have their feature codes changed. Figure 2-8 illustrates the concept of area closure at the Thematic neat line within an individual ETB Map File.

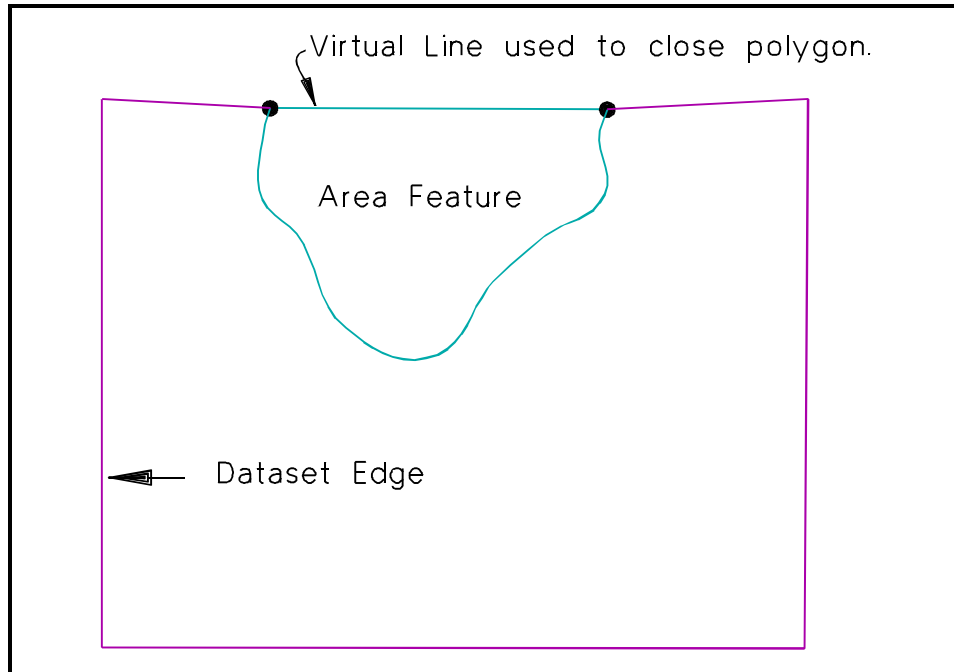


Figure 2-8: Area Closure at the Neat Line

Allowable Relationships

Table 2-9 summarizes the allowable connection and co-location relationships within the structured Themes. The transportation structures feature class consists of bridges, which are represented as symbols (explicit nodes) within the ETB Data Base.

TABLE 2-9: ALLOWABLE RELATIONSHIPS				
Feature Class	Trans. Network	Trans. Structures	Hydro. Network	Water bodies
Transportation Network	Connection	Connection	N/A	N/A
Transportation Structures	Connection	N/A	N/A	N/A
Hydrographic Network	N/A	N/A	Connection	Connection
Waterbodies	N/A	N/A	Connection	Connection

About the Transportation Themes

Transportation Network (Theme 100)

Content This Theme contains topologically structured road and rail centerlines according to the logical consistency specifications. Bridge symbols (Feature Code RRBRSY) are included as explicit nodes on this Theme.

Transportation Associated Features (Theme 110)

Content This Theme contains symbology and text associated with transportation. There is no neat line associated with this Theme.

Roads

Representation Roads are represented as linear features on Theme 100.

Indexing Individual road features are assigned unique index keys to permit attribute linkages.

Classification Roads are classified according to functional classification through the use of Feature Codes. Table 2-10 summarizes this breakdown.

TABLE 2-10: ROAD NETWORK CLASSIFICATION	
Feature Code	Classification Description
RRRDA	Arterial Numbered Route
RRRDC	Collector Numbered Route
RRRDLG	Local Named Road, Gravel Surface
RRRDLN	Local Numbered Route
RRRDLO	Road Local Other
RRRDLP	Local Named Road, Paved Surface
RRRDM	Municipal Road/Street
RRRDN	National Numbered Route (Trans Canada)
RRRDO	Road, Other (includes resource roads)
RRRDRAMP	Interchange Ramp

Ramps

Definition	For the purpose of the ETB Map Files, a ramp is defined as a section of road which connects a primary route to a secondary route in the vicinity of an at-grade intersection or grade separated interchange.								
Distinguishing Characteristics	<p>Ramps are given special consideration within the ETB Map Files:</p> <ul style="list-style-type: none"> the Feature Code RRRDRAMP is used to classify ramps; ramps are assigned special index keys which differ in format from those of other road linear features. 								
Indexing	<p>Ramp index keys are coded according to the following format:</p> <p style="text-align: center;"><i>Iggggggqn</i></p> <p>where:</p> <table> <tr> <td><i>I</i></td><td>is the one character ramp identifier used for all ramps in the province</td></tr> <tr> <td><i>gggggg</i></td><td>is a 6 character geocode representing the mid point of the interchange</td></tr> <tr> <td><i>q</i></td><td>is the interchange quadrant within which the ramp is located</td></tr> <tr> <td><i>n</i></td><td>is a sequential ramp number within quadrant <i>q</i></td></tr> </table> <p>For more specific information regarding the assignment of ramp index keys, refer to Appendix G.</p>	<i>I</i>	is the one character ramp identifier used for all ramps in the province	<i>gggggg</i>	is a 6 character geocode representing the mid point of the interchange	<i>q</i>	is the interchange quadrant within which the ramp is located	<i>n</i>	is a sequential ramp number within quadrant <i>q</i>
<i>I</i>	is the one character ramp identifier used for all ramps in the province								
<i>gggggg</i>	is a 6 character geocode representing the mid point of the interchange								
<i>q</i>	is the interchange quadrant within which the ramp is located								
<i>n</i>	is a sequential ramp number within quadrant <i>q</i>								

Railroads

Representation	Railroads are represented as linear features on Theme 100. Only main lines are included within the rail network on Theme 100. Bridge symbols (Feature Code RRBSY) are included as explicit nodes. Sidings and other miscellaneous rail features are contained on Theme 110.
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Indexing	Individual rail network features are assigned unique index keys to permit attribute linkage.
Classification	There are only two possible Feature Codes used to classify rail network features within the ETB Data Base:
	RRRR indicates an active rail link
	RRRR04 indicates an abandoned rail link

Transportation Theme Index Keys

Format	Index keys are assigned to all linear features on the Transportation Network Theme (100). These keys are unique within the Province of New Brunswick, and are coded according to the following format:
	<i>Rmmmmnnnnn</i>
	where:
R	is the first character of the index key (except for Ramps)
<i>mmm</i>	is the 3 character geocode corresponding to the map sheet within which the feature is located
<i>nnnnn</i>	is a 5 digit sequential number within the map sheet, zero filled on the left
Example	RM2M00015
Map Geocodes	Appendix C contains the geocode for each ETB Map File number.
Ramp Index Keys	Note that ramp index keys are assigned according to the format described previously.

About the Hydrography Themes

Hydrography (Theme 300)

Content	The Hydrography Theme contains topologically structured linear and polygon features representing rivers, lakes, islands, coastline and swamps. Features are enclosed by a neat line at the map sheet boundary.
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Hydrographic Spines (Theme 310)

Content	This Theme contains topologically structured <i>hydrographic spines</i> , which are single lines placed approximately through the center of waterbodies to provide continuous hydrographic network connectivity. Each single line stream which is connected to a waterbody will also be connected to the network. Features are enclosed by a neat line at the map sheet boundary.
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Associated Hydrography (Theme 320)

Content	The Associated Hydrography Theme contains non-topological data associated with hydrography, such as text, symbology, dams, breakwaters, dikes, fish ladders, flumes, lobster pounds, rapids, rocks and falls.
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Waterbodies

Definition	Waterbodies are polygon features which define an area containing water.
Virtual Features	<p>Virtual features are used to close waterbody polygons between adjacent waterbody features (for example, at the intersection of a double line river and a lake). Boundaries between waterbodies will be represented by only one line. Virtual waterbody features will be given the Feature Code WA_V unless coastline is involved, in which case the Feature Code will be WACO_V.</p> <p>Figure 2-9 illustrates the concept of waterbody virtual features.</p>

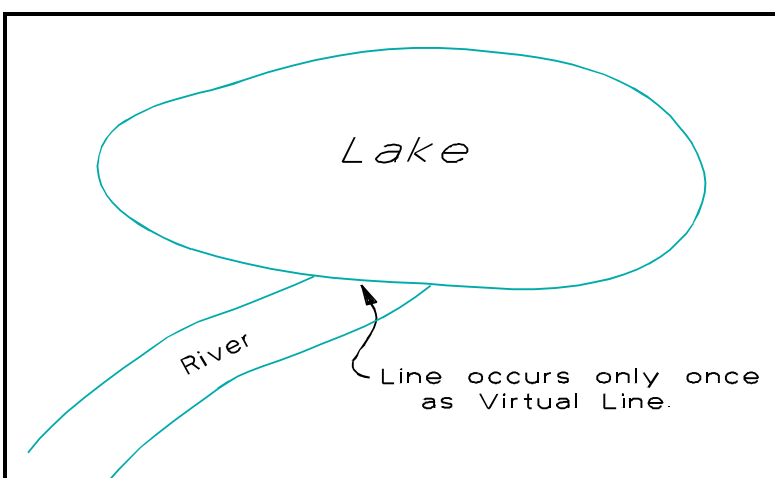


Figure 2-9: Waterbody Virtual Features

Classification

Waterbodies are classified using the Feature Code attribute. Table 2-11 summarizes these codes.

TABLE 2-11: WATERBODY CLASSIFICATION	
Feature Code	Classification Description
WACA	Canal
WACB	Cranberry Bog
WALK	Lake
WARS	Reservoir
WARVDL	Double Line River
WARVIS	River Island
WARVLK	River Lake
WASW	Swamp

Note

Waterbody boundaries are indicative of the situation which existed at the date when the aerial photography was collected. They may or may not reflect current conditions, which are subject to seasonal and climatic change.

Indexing

Waterbody polygons are assigned unique polygon labels as index keys to permit attribute linkage.

Rivers

Classification Rivers are classified using the Feature Code. Table 2-12 lists these classes:

TABLE 2-12: RIVER CLASSIFICATION	
Feature Code	Classification Description
WARVDL	Double Line River
WARVSL	Single Line River

Note Double line rivers are considered to be waterbody polygons.

River boundaries are indicative of the situation which existed at the time the aerial photography was collected.

Indexing Rivers are assigned unique index keys to permit attribute linkage.

Coastline

Definition The coastline feature contained within the ETB Data Base is representative of the Mean High Water (MHW) elevation contour in the area of the map. It serves as a line separating tidal water from land.

Note The coastline does not correspond to an actual feature on the ground.

Current research on coastline definition at NBGIC may result in a revised definition and/or representation of the coastline in a future version of the ETB.

Classification Coastline features are assigned the Feature Code WACO.

Indexing Coastline features are assigned unique index keys to permit attribute linkage.

Swamps

Classification

Swamp features are assigned to the Feature Code WASW. Swamps are considered to be waterbody polygons and are enclosed by virtual features at the neatline and by other waterbody features where they adjoin.

Note

Swamp boundaries were interpreted by the stereo plotter operator from photography which reflected the status of wetlands as of that date. These boundaries may or may not be indicative of current wetland conditions, which are subject to seasonal and climatic changes.

Indexing

Swamp polygons are assigned unique index keys as polygon labels for attribute linkage.

Spines

Definition

A spine is a linear feature comprising a segment or group of segments which provide hydrographic network connectivity through waterbodies.

Collection

Spines were compiled by creating line segments representing the approximate centerline of double line rivers and waterbodies. Figure 2-10 illustrates the methodology used to create spines.

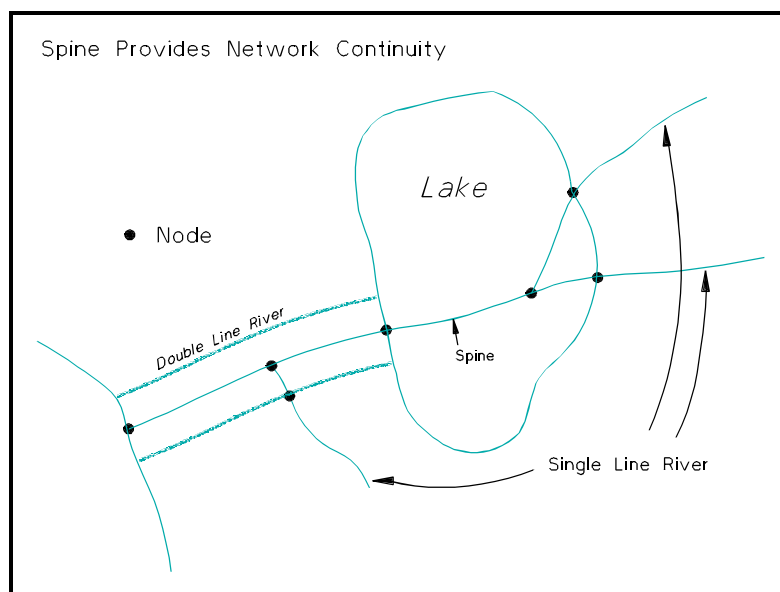


Figure 2-10: Waterbody Spines

Limitation	Spines are not present within waterbodies where the total length of the drainage pattern is less than 2.0 kilometres in length. The intent is to avoid hydrographic spines in small isolated drainage patterns.
Classification	Spines are assigned the Feature Code WASP_V.
Indexing	Spines are assigned unique index keys to permit attribute linkage.

Hydrographic Theme Index Keys

Format	Index keys are assigned to all Hydrographic Network linear features and waterbody polygons within Theme 300 and 310. These keys are unique within the Province of New Brunswick, and are coded according to the following format: <i>Hmmmmnnnnn</i> where: H is the first character of the index key <i>mmm</i> is the 3 character map geocode for the file containing the feature <i>nnnnn</i> is a 5 digit sequential number within the map sheet, zero filled on the left
Example	HM2M00015
Note	No distinction is made between spines and waterbodies in the assignment of index keys.

Known Limitations of the ETB Data Base

It is important to note that the ETB Data Base represents a version (currently Specification 3.3) of a digital product which has been compiled to meet a specific structuring specification. The structuring specification was developed to achieve a certain product standard within the constraints of available resource budgets. As such, the ETB Data Base contains some limitations.

It is expected that revisions and/or enhancements will be made to this specification based upon feedback from users of the ETB Data Base which may result in the removal of some or all of the limitations described within this subsection.

Non Structured Themes

Limitation

There are a number of Themes within the ETB Data Base which have not as yet been processed to the logical consistency specifications as described in the New Brunswick Land and Water Information Standards. Table 2-13 summarizes these Themes.

TABLE 2-13: NON STRUCTURED THEMES	
Theme Number	Description
200	Surround Text
210	Delimiters
220	Land Cover/Land Form
230	Utility
240	Buildings
250	Designated Areas
260	Structures

Data Format Differences

Limitation

Individual map sheet files within the ETB Data Base were collected to one of two different compilation specifications, based primarily on the limitations of the mapping technology available at the time of compilation:

- PDP - this was the original compilation method which was used up to 1988;
- VAX - this was the compilation procedure used to complete ETB files for the province after 1988.

Major Differences

As a result of this mix of technologies, there are a number of differences in the manner in which features are represented within individual map files. Table 2-14 summarizes these differences.

TABLE 2-14: MAJOR DIFFERENCES BETWEEN PDP AND VAX MAP FILES

Category	PDP Files	VAX Files
Feature Codes	No feature code hierarchy is observed for area Features.	Feature code hierarchy is observed for closure of area Features.
Area Features	Area features for Hydrography (WA), Land Cover (LC) and Designated Areas (DA) are closed within this feature class (self contained). Area centroids are not used.	Only features having elevations are self-contained. Other area features are closed using boundaries determined according to Feature Code hierarchy. Area centroids are present as text strings with Feature Code of area feature.
Line Duplication	Duplicate lines occur where features share a common boundary. Duplicate lines are not co-located.	Duplicate lines are not present. Line presentation determined by Feature Code hierarchy.
Elevations	Elevations are not normally present.	Certain features have elevations associated with them.
Sliver Polygons	Sliver polygons may exist along boundaries of features which should be common (co-location was not done).	No sliver polygons exist. Common boundary carries Feature Code of highest feature in hierarchy.

Processing Levels

It should also be noted that, in addition to differences in compilation specifications, original ETB files were processed to one of three possible “levels” as indicated within Appendix C: HYB, ETX or E15. These processing levels, which are no longer used, may also result in differences in feature representation between files.

A brief description of each of these processing levels is given below:

- HYB - these are commonly known as “hybrid” files. They have not been processed to any logical consistency level;

- ETX - files in this group have been processed to former logical consistency Level 1.0;
- E15 - files in this group have been processed to former logical consistency Level 1.5.

Table 2-15 summarizes differences between these levels which are relevant to ETB Data Base users (i.e., they apply to non-structured Themes). For a more in depth discussion of the differences among these obsolete processing levels, refer to the NBGIC document *Processing to Logical Consistency (March 1994)*.

It should be noted that, in addition to the above, six files within Table C-1 have been marked as CMB. The level of processing carried out on these files is not specifically known.

TABLE 2-15: FORMER PROCESSING LEVEL DIFFERENCES			
Category	HYB	ETX	E15
Compilation Type(s)	VAX	PDP, VAX	PDP
Network Data	May contain overshoots and undershoots on non-structured Themes	Overshoots and undershoots on Themes 220 and 250	As for ETX
Bridge Representation	Area Features included on Theme 110	Area Features may be present on Theme 110	Area Features included on Theme 110
Text	No corrections	No corrections	Corrections added

Feature Code Hierarchy

Table 2-16 summarizes the Feature Code hierarchy used to determine the feature code associated with common boundaries in the VAX files.

TABLE 2-16: VAX FEATURE CODE HIERARCHY	
Level	Description
1	Transportation and Hydrographic
2	Features requiring accurate elevations
3	Linear features (fence, tree lines, retaining wall)
4	Tree areas
5	Reforested areas
6	Remaining areas, excluding swamps
7	Swamps

Significance

Unstructured themes may contain data in either format, depending upon when the ETB Map File was originally compiled. Appendix C indicates the level of processing completed on each file prior to ETB Level 3.3 processing, as well as the compilation method (PDP or VAX).

Edge Matching

Limitation

Edge matching has not been carried out on non structured Themes (see Table 2-13 for a list of non structured Themes).

Significance

Area misclosures may occur across map file boundaries. Network connectivity may be broken across map file boundaries.

Road Centerline Positional Accuracy

Limitation

The positional accuracy of the road centerlines on the Transportation Network Theme (100) may vary depending upon the source of the data from which the feature was compiled. In particular, road centerlines captured by heads up digitizing from NBGIC DPM Map Files were estimated by using the mid point between Right of Way property lines.

Significance	The road centerline may not accurately represent the situation on the ground.
Data Source	The source of the data may be determined from field AA of the Source ID.
Accuracy	The estimated accuracy of the feature may be determined from field D of the Source ID.

Road Centerline Completeness

Limitation	<p>The user is advised that the structuring process used to update the road centerlines within the ETB Map Files is subject to a number of restrictions regarding the completeness of the data:</p> <ul style="list-style-type: none"> the data is current as of the date upon which the “snapshots” of the source files were collected for use in the ETB Data Base structuring (late 1995). DPM Data Base Right of Way corridors were overlaid on ETB Map File road centerlines <i>only within municipal boundary limits</i>. It is therefore possible that an occasional rural subdivision may not be included. Roads within trailer parks (which are treated as private property) will not normally be included.
Significance	Additional revisions may be required to make the data suitable for use with some applications.

Elevations

Limitation	No elevations are present within the ETB Data Base files.
Significance	<p>All network intersections occur in two dimensional space. This implies that topological nodes will occur at grade separated intersections. Transportation planners using the ETB Data Base for routing applications must therefore ensure that impossible real world turns (for example, a right turn off a bridge) are correctly modelled by coding turn restrictions at these nodes to prevent such turns.</p> <p>No checks on drainage patterns (for example, check downhill) are possible.</p>

DTM Files Each ETB Map File has a corresponding NBGIC Digital Terrain Model (DTM) File which may be used to interpolate elevations for features within the ETB Map File.

Currency of Mapping

Limitation With the exception of the Transportation Network Theme (100), features within the ETB Map Files are only current as of the date of the aerial photography from which the file was compiled (see Appendix D for these dates). Changes which have occurred subsequent to this date are not reflected in the files.

Significance Features within the files may no longer accurately reflect existing conditions.

Coastline Representation

Limitation The coastline contained within the ETB Map Files (Feature Code WACO) was obtained by using contouring procedures with the Mean High Water (MHW) elevation fixed in the area of the mapping. It is therefore not necessarily representative of an actual land/water boundary.

Significance The coastline feature should not be used in situations where an accurate indication of land/water boundaries is required.

Note NBGIC is currently undertaking a study regarding coastline definition which may result in an updated coastline representation in a subsequent version of the ETB Data Base.

Maintenance

Limitation With the exception of the Transportation Network Theme (100), there is no regular maintenance program in place for updating features within the ETB Map Files.

Updates to Theme 100 are at present limited to those roads under NBDOT or NBDNR&E jurisdiction, and new roads added from the NBGIC DPM Data Base.

Significance Features may not reflect current conditions on the ground.

Section 3 Contents of the ETB Attribute Files

Introduction

This section deals with the contents and organization of the ETB Attribute Files. It defines terms needed to understand the contents and structure of these files, tells how information is organized within the files, and provides an overview of how the attribute files are linked to the map file.

Definitions

RDBMS	Relational Data Base Management System. A software product which organizes data into tables. Rows within these tables represent individual instances of data (records), and columns represent distinct data entities within each record. Examples of RDBMS products include INGRES, ORACLE and Microsoft Access.
Attributes	<p>Attributes are textual records which describe a digital map feature. Attributes may be attached to features in one of two ways:</p> <ol style="list-style-type: none">1. By encoding descriptive text within a field supplied as part of the internal GIS map data base structure. In CARIS, attribute fields include the Source ID, Theme/User Number and Feature Code.2. By linking records within a RDBMS table to a specific map feature or group of features through the use of an <i>index key</i>. This method is employed to link the ETB Attribute files to the ETB Map Files.

Data Sources for the ETB Attribute Files

NBGIC ETB96 Files	Some attributes (ETB Source ID, Index Key, Feature Code, Theme/User Number, Source ID field descriptive data) were extracted from the current ETB Map Files during structuring.
NBDOT	For roads under NBDOT jurisdiction, the original Source ID, Feature Code and Index Key attributes were obtained from the NBDOT Road Inventory Data Base.

NBGIC Original ETB	The original Source ID and Feature Code attributes were obtained from the <i>original</i> NBGIC ETB Map File (i.e., the file which existed prior to ETB Level 3.3 processing) for those features not extracted from NBDOT Road Inventory Data Base files.
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Typical File Sizes

Road Attribute File

Record Length	The length of each record within the Road Attribute File is 170 characters (bytes) including the carriage return (CR) character at the end of each record.
Typical File Sizes	File sizes may vary from approximately 10 Kb to in excess of 100 Kb, depending upon the number of transportation network features present within the file.

Hydrographic Attribute File

Record Length	The length of each record within the Hydrographic Attribute File is 134 characters (bytes), including the carriage return (CR) character at the end of each record.
Typical File Sizes	File sizes may vary from approximately 10 Kb to in excess of 100 Kb, depending upon the number of hydrographic features present within the file.

About the ETB Attribute Files

Road Attribute File

Description	The Road Attribute File contains descriptive information about Transportation Network (Theme 100) linear features, <i>including both road and rail features.</i>
Filename	Individual Road Attribute Files will have a filename in the form <i>filename.Ryy</i> , where <i>filename</i> is the corresponding ETB map file name, and <i>yy</i> is the version of the ETB Data Base from which the file was produced.

Format Road Attribute Files are supplied as DOS ASCII text records. Individual fields within these records are fixed length and are not delimited.

Content Table 3-1 presents the layout for records within the Road Attribute File.

TABLE 3-1: ROAD ATTRIBUTE FILE LAYOUT		
Field Number	Record Position (Char.)	Field Description
1	1 - 12	Index key from ETB96 file
2	13 - 24	Index key from NBDOT
3	25 - 36	Feature Code from source data base (for example, NBDOT, DNR&E, etc.)
4	37 - 48	Feature Code from ETB96 file
5	49 - 52	Theme/User Number from ETB96 file
6	53 - 64	Source ID from source data base
7	65 - 76	Source ID from ETB96 file
8	77 - 106	Descriptive data from field AA of Source ID from ETB96 file
9	107 - 136	Descriptive data from field BC of Source ID from ETB96 file
10	137 - 144	Descriptive data from field D of Source ID from ETB96 file
11	145 - 164	Descriptive data from field EEE of Source ID from ETB96 file
12	165 - 168	Descriptive data from field FFFF of Source ID from ETB96 file
13	169	"A" if Index Key in Field 1 is active; "R" if Index Key in Field 1 is retired.
<i>NOTE: All fields are left justified</i>		

Indexing to Map Features	Field 1 is used to index Road Attribute File records to corresponding features within the ETB map files.
--------------------------	--

Hydrographic Attribute File

Description	The Hydrographic Attribute File contains descriptive information about hydrographic network and water body features on Themes 300 and 310.
Filename	Individual Hydrographic Attribute Files will have a filename in the form <i>filename.Hyy</i> , where <i>filename</i> is the corresponding ETB Map File name, and <i>yy</i> is the version of the ETB Data Base from which the file was produced.
Format	Hydrographic Attribute Files are supplied as DOS ASCII text records. Individual fields within these records are fixed length and are not delimited.
Content	Table 3-2 presents the layout for records within the Hydrographic Attribute File.
Indexing to Map Features	Field 1 is used to index Hydrographic Attribute File records to corresponding features within the ETB Map Files.

Links to Map Features

Feature Index Keys	All GIS and some CAD packages permit the assignment of RDBMS attribute records to digital map features through the use of feature index keys. These keys permit the software to access the RDBMS and find an attribute record in a data table which has the same feature index key within one of its fields.
Unique Keys	With the exception of ramps, all indexed features within ETB Map Files will be assigned unique keys. Duplicate keys may exist under some conditions on ramps.

TABLE 3-2: HYDROGRAPHIC ATTRIBUTE FILE LAYOUT		
Field Number	Record Position (Char.)	Field Description
1	1 - 12	Index key from ETB96 file
2	13 - 24	Feature Code from ETB96 file
3	25 - 28	Theme/User Number from ETB96 file
4	29 - 40	Source ID from ETB96 file
5	41 - 70	Descriptive data from field AA of Source ID from ETB96 file
6	71 - 100	Descriptive data from field BC of Source ID from ETB96 file
7	101 - 108	Descriptive data from field D of Source ID from ETB96 file
8	109 - 128	Descriptive data from field E of Source ID from ETB96 file
9	129 - 132	Descriptive data from field FFFF of Source ID from ETB96 file
10	133	"A" if Index Key in Field 1 is active; "R" if Index Key in Field 1 is retired.
<i>NOTE: All fields are left justified</i>		

Section 4 Working with the ETB Data Base

Introduction

This section provides explanations and guidelines for working with your digital topographic data. It includes guidelines for enhancement of the files, integration of the digital topographic data base files with other datasets, and ongoing maintenance of the files.

Displaying ETB Map File Data

This subsection provides guidelines for displaying ETB Map File data. Figure 4-1 illustrates a typical ETB Map File which contains a variety of map features. The map display examples contained within this section are based upon data within this file.

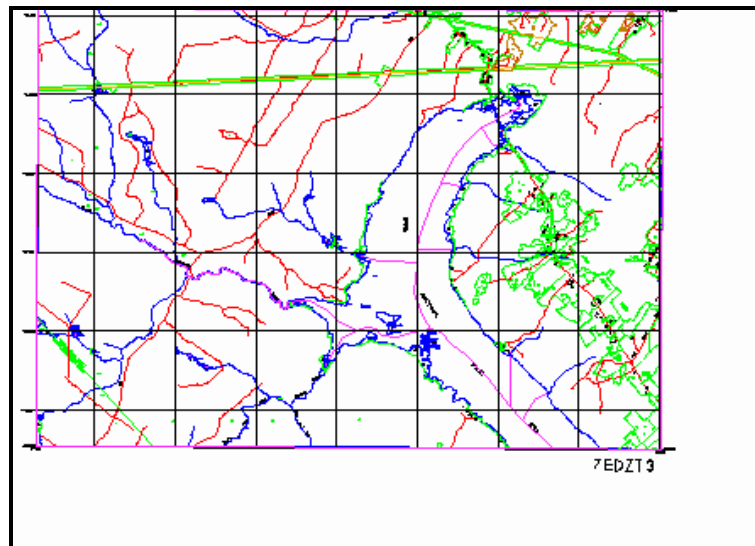


Figure 4-1: Typical ETB Map File Features

By Theme/User Number

Theme Organization

CARIS Theme/User Numbers are used to group common ETB map features into layers which can be displayed separately. Table 2-1 describes the Theme groups within ETB Map Files.

For CARIS Users

CARIS users can execute the Display Parameters (Visibility Parameters in CARIS for Windows) command from within

CARED or CARMAN and then select the Theme option. Enter the number(s) of the Theme(s) you wish to display.

For Other Users

If your software allows you to attach attribute records to indexed map features, you can use the ETB Attribute Files to select features by Theme/User Number. Note that only features on Themes 100, 300 and 310 can be displayed in this manner, as these are currently the only Themes containing feature index keys.

Example

Figure 4-2 illustrates the display produced by selecting Theme 100 features from the map shown in Figure 4-1.

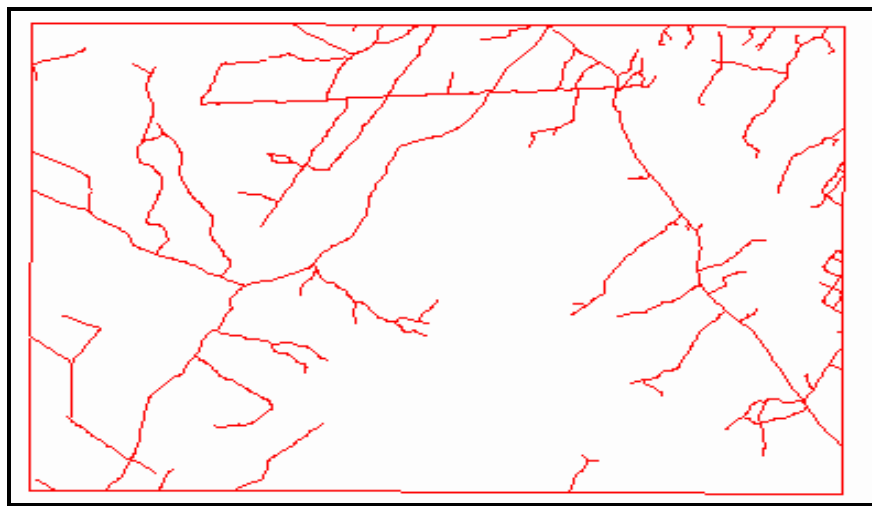


Figure 4-2: Feature Display by Theme

By Feature Code Hierarchy

Feature Code Hierarchy

ETB Feature Codes are created in a structured hierarchy, with the two leftmost characters representing the major feature class to which the features belong. Table 2-6 summarizes these major classification groups. More detailed classification information is contained in character positions 3 through 12 of the feature code.

The following example is illustrative of the breakdown of feature classes within the transportation category:

RR	- Transportation
RRRD	- Transportation, road
RRRDA	- Transportation, road arterial

For CARIS Users

Execute the Display Parameters (Visibility Parameters in CARIS for Windows) command within CARED or CARMAN and select the Feature Codes option. Then enter as much of the Feature Code as required to select the features you wish to display. Terminate the Feature Code string with a wild card character (*) to avoid exact character matching beyond the limits of the search string specified.

The following are examples of DP display criteria for Feature Codes:

RR*	will display all features beginning with RR
RRRD*	will display all features beginning with RRRD
RRRDA*	will display all features beginning with RRRDA
RRRDA	will display only those features which <i>exactly match</i> the string RRRDA

For Other Users

If your software allows you to attach attribute records to indexed map features, you can use the ETB Attribute Files to select features by Feature Code. Note that only features on Themes 100, 300 and 310 can be displayed in this manner, as these are currently the only Themes containing feature index keys.

Example

Figure 4-3 illustrates the display produced by selecting Feature Codes RRRD* from the map shown in Figure 4-1.

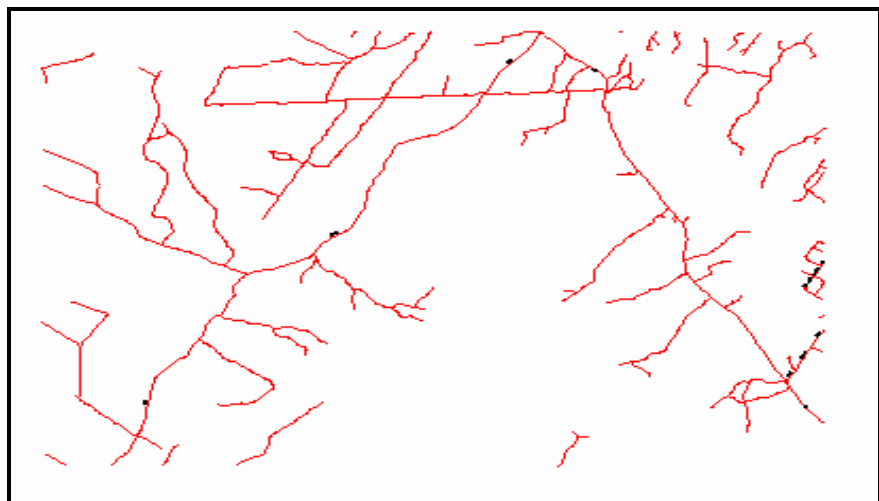


Figure 4-3: Feature Display by Feature Code

By Source ID

Format	The format of the Source ID CARIS attribute has been previously described within Section 2 of this guide. Tables 2-2 through 2-5 describe the various allowable codes for the subfields comprising this attribute.								
For CARIS Users	<p>Execute the CARIS Display Parameters (Visibility Parameters in CARIS for Windows) command and select the Source ID option. Then enter as much of this Source ID as required to select the features you wish to display. Terminate the string with a wild card character (*) to avoid exact character matching beyond the limits of the search string specified.</p> <p>The following examples of DP display criteria for Source ID:</p> <table><tr><td>D*</td><td>will display all features which were obtained from NBDOT Road Inventory Map files</td></tr><tr><td>D2*</td><td>will display only those NBDOT features obtained from Theme 2050 of the Road Inventory map files</td></tr><tr><td>AAVD*</td><td>will display those features captured by heads up digitizing by a NBGIC contractor</td></tr><tr><td>AAVDCGEO*</td><td>will display those features captured using heads up digitizing with an expected accuracy of 3-5 metres by contractor Geoplan Consultants Inc.</td></tr></table>	D*	will display all features which were obtained from NBDOT Road Inventory Map files	D2*	will display only those NBDOT features obtained from Theme 2050 of the Road Inventory map files	AAVD*	will display those features captured by heads up digitizing by a NBGIC contractor	AAVDCGEO*	will display those features captured using heads up digitizing with an expected accuracy of 3-5 metres by contractor Geoplan Consultants Inc.
D*	will display all features which were obtained from NBDOT Road Inventory Map files								
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AAVD*	will display those features captured by heads up digitizing by a NBGIC contractor								
AAVDCGEO*	will display those features captured using heads up digitizing with an expected accuracy of 3-5 metres by contractor Geoplan Consultants Inc.								
For Other Users	If your software allows you to attach attribute records to indexed map features, you can use the ETB Attribute Files to select features by Source ID. Note that only features on Themes 100, 300 and 310 can be displayed in this manner, as these are currently the only Themes containing feature index keys.								
Example	Figure 4-4 illustrates the display produced by selecting features with Source ID AAVD* from the map shown in Figure 4-1.								

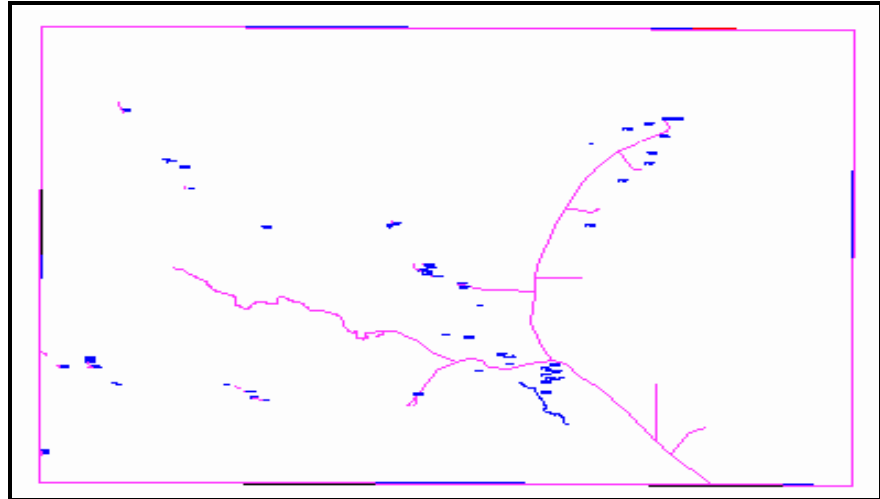


Figure 4-4: Feature Display by Source ID

By Attribute Value

Attribute Query

GIS software allows the user to select and display features by specifying a search criteria (filter) to be applied on a specific field (column) in a RDBMS data table. The search is usually specified using a Structured Query Language (SQL) statement.

Hints

You may need to understand SQL syntax in order to carry out a feature selection by attribute search.

You will need to know how data is stored within the RDBMS table to be searched. Some of the data storage characteristics you will need to know include:

- the *name(s) of the data base table(s)* within which your data is stored;
- the *data base field names* associated with each data element within a data base table;
- the *data format* associated with each data field (for example, character or numeric, upper or lowercase letters, number of decimals, etc.).

For CARIS Users

The CARIS Data Manager (CARMAN) may be used to display features by attribute value. The following commands are used:

FESA	Feature Select by Attribute Search
HLSL	Highlight Selection

OR

MKSL Mark Selection (CARIS requests user to specify a colour)

DR	Draw
----	------

For Non CARIS Users

Commands will vary depending upon the GIS software used.

Example

Figure 4-5 illustrates the display produced by searching the Road Attribute File for features with NBDOT Index Key values beginning with the string "R0616".

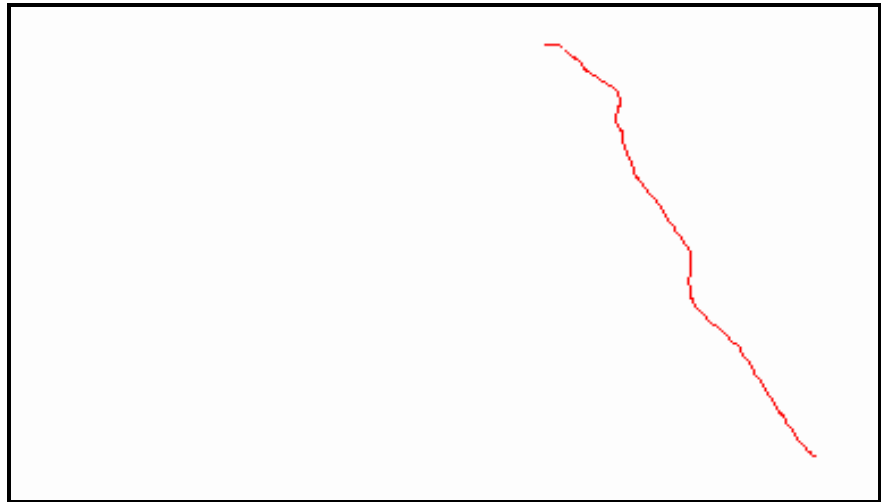


Figure 4-5: Feature Display by Attribute Value

Spatial Analysis Capabilities

Themes within the ETB Map Files which are topologically structured (or capable of being topologically structured) can be used for certain analytical operations. Guidelines for spatial analysis are given below by Theme.

Transportation Network Theme (100)

Topology

Network topology is present on Theme 100.

Spatial Analysis

Connectivity analysis can be performed. Examples of connectivity analysis include:

- selection of shortest route between two points
- selection of optimum delivery routes
- determination of service response zones

For Non CARIS Users Network topology must be constructed using your GIS software prior to performing spatial analysis operations.

Notes All intersections occur in two dimensional space. This implies that cross roads at grade separated intersections which do not actually connect on the ground will be connected (form explicit nodes) within the digital map file. The user will have to code turn restrictions at these nodes to avoid unrealistic turn movements (for example, right turns off a bridge onto the road below).

Coding for one way streets speed limits and other link/node restrictions will have to be added by the user.

Network connectivity is assured across map sheet boundaries.

Hydrographic Network Themes (300 and 310)

Topology Network topology is present across Themes 300 and 310. Natural hydrographic linear network features (single line rivers) are present on Theme 300, and water body spines are present on Theme 310. Polygon topology is present on Theme 300.

Spatial Analysis Connectivity analysis can be performed using Themes 300 and 310 collectively.

Polygon operations can be performed on Theme 300.

For Non CARIS Users Network and polygon topology must be constructed on Theme 300 prior to performing polygon operations.

Network topology must be constructed across Themes 300 and 310 prior to performing network connectivity analysis.

Notes No elevations are present in the ETB files. Network analysis is therefore restricted to two dimensions.

Network connectivity is assured across map sheet boundaries.

Polygon closure is assured across map sheet boundaries. Removal of virtual neat line features will permit the formation of continuous polygons across multiple map files.

Other Spatial Analysis

DTM

Digital Terrain Model Data Base Map Files are also available for each ETB map window. Other analysis operations can be performed once DTMs are constructed. See Sections 5 and 6 of the Guide for additional information concerning the DTM Data Base.

Creating User Attribute Files

It is possible to create additional feature attribute files using your RDBMS software which can be linked to ETB map features.

Use of Keys

ETB File Keys

Index keys exist within ETB Dataset files for the following features:

- Transportation Network linear features on Theme 100
- Hydrographic Network linear features on Themes 300 and 310
- Water body polygons (including islands) on Theme 300

These keys may be used to link additional attributes to ETB map features.

What to Do

Procedure

1. Construct a new data base table using your RDBMS software. Define the first field (column) in this table to be of type CHARACTER and assign a length of 12 (characters). This field will be used to contain the index key values of features for which attribute records are required.

2. Define additional fields as necessary to store the attribute data desired for each feature.
3. Identify the index key(s) associated with the map feature(s) for which you wish to store attribute data.
4. Enter the ETB feature index keys in column 1 of your RDBMS table.
5. Enter the other attributes which describe each map feature in the remaining columns next to the applicable Feature index key.

Hints

If you are assigning attributes to a large number of features within an ETB Map File, use your GIS software to create a plot with the index keys labelled alongside each feature. Keep this plot for future reference.

If you are assigning attributes to a small number of features, you can determine the index keys by interactively selecting each feature and displaying its map attributes.

Suggestion

If you wish to assign user attributes to ETB features which are not currently indexed, consult NBGIC before developing an indexing specification. It may be possible to choose an indexing scheme which can be adopted as an ETB standard and thus avoid future linkage problems when subsequent revisions of the data base are received.

Warning

Future releases of the ETB Data Base may contain a different index key for a specific feature if that feature has been subdivided. If this occurs, the original feature index key will be "retired".

Consult NBGIC for details on accessing historic attribute records for "retired" keys.

What Not to Do

Appending Fields to ETB Attribute Files

It is not good practice to add user attributes by appending new fields to existing ETB Road or Hydrographic Attribute files. These files could be overwritten if a subsequent version of the ETB Dataset files are received and the ETB Attribute Files are reloaded from the new version.

Changing Feature Keys	Do not change the index keys assigned to ETB Map File features. Relationships to user defined keys may be lost if a subsequent version of the ETB Data Base is loaded.
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Adding New Map Features

Users may wish to add new features to ETB Map Files in order to create custom map products suitable for use within their own agencies. An early example of a custom digital product created from ETB Map Files is the NBDOT Road Inventory Data Base of digital files.

Users may also wish to enhance existing ETB Map Files by updating map features where changes have occurred.

This section contains guidelines on how to update ETB Map Files in a manner which will both ensure that such updates are not lost when a new version of the ETB Map Files is obtained, and also maintain the integrity of the existing structuring specifications.

Use of Separate Themes

Procedure	Assign a new Theme/User Number to be used for the storage of custom map features, or revisions to existing ETB Map File features.
Rationale	Changes to the ETB Map File can be isolated easily by Theme Number and saved to a backup file. When a new version of the ETB Map File is received, the custom edits can be restored by simply importing the user Themes to the new ETB version from the backup file.
Guidelines	<p>Consult with NBGIC and the New Brunswick Land and Water Information Standards Manual prior to establishing Theme Number standards for your agency.</p> <p>Avoid assigning Theme Numbers within the range of numbers currently in use or planned for use with the ETB Data Base (i.e., avoid the numbers 0 through 399).</p> <p>Establish agency digital map standards for Theme Numbers to ensure consistency across all applications.</p> <p>Create only enough Theme Numbers to provide a logical separation between user map feature classes (for example, topological network features versus associated text and symbology). Remember that the Feature Code hierarchy</p>

can be used to distinguish between features for display purposes also.

Leave a gap between Theme Numbers to allow room for subsequent additions. An increment of 10 between numbers is suggested.

Use of ETB Data Base Feature Code Hierarchy

Procedure	Use the existing Feature Code structure and hierarchy as a basis for the establishment of new Feature Codes to be used to represent custom map features.				
Rationale	<p>The existing ETB Data Base Feature Code hierarchy is based upon standards developed originally at a national level and subsequently adapted for use within the LRIS mapping program. This hierarchy represents the basic feature classification scheme for topographic data within the Maritime Provinces and is widely known within the region.</p> <p>Use of this standard will facilitate use of your data by others.</p>				
Guidelines	<p>Use as much of the existing feature code hierarchy as possible. For example, if you wish to obtain a finer classification of urban streets and determine that this must be done through feature coding (it could also be done through assignment of user attributes to the map features), append the refined classification scheme to the end of the existing Feature Code for municipal roads (RRRDM). The new codes would therefore be defined as follows:</p> <table><tr><td>RRRDMA</td><td>Municipal Road, Class A</td></tr><tr><td>RRRDMB</td><td>Municipal Road, Class B</td></tr></table> <p>Do not use the first character positions within the feature code to identify your agency. The Source ID attribute can be used to do this.</p> <p>Use attributes wherever possible to avoid the need for new Feature Codes.</p>	RRRDMA	Municipal Road, Class A	RRRDMB	Municipal Road, Class B
RRRDMA	Municipal Road, Class A				
RRRDMB	Municipal Road, Class B				

Use of ETB Data Base Source ID Standards

Procedure	Use the existing ETB Data Base standard format for the Source ID attribute to identify the source of your data.
Rationale	<p>The existing standard can easily be expanded to accommodate additional agency requirements.</p> <p>Use of this standard will facilitate use of your data by others.</p>
Guidelines	<p>Consult NBGIC regarding the assignment of new codes where necessary to describe various components of the Source ID.</p> <p>Avoid the use of the Z (unknown) codes if at all possible.</p>

Accuracy Considerations

Procedure	Users collecting topographic data are advised that adding map features to the ETB Map Files which do not meet the minimum accuracy specification for the product (± 2.5 metres) is not recommended. If such features are added, ensure that the Source ID accuracy subfield (field D) is properly coded to reflect this anomaly. An example of where this situation occurs within the ETB Data Base is where road centerlines were added based upon the property boundaries in the Digital Property Map Data Base.
Rationale	Users expect that all features within an ETB Map File are collected to the same accuracy standard. Incorrect conclusions may result from analysis of data which does not conform to this standard.
Guidelines	<p>Data collected using total stations and differentially corrected GPS measurements will normally meet the minimum accuracy standards of the ETB Data Base.</p> <p>Data collected using GPS measurements which has not been differentially corrected will <i>not</i> meet the minimum accuracy standard.</p> <p>Data captured from hand digitizing or scanning of manuscripts may not meet the minimum accuracy</p>

requirement if the scale of the manuscript is smaller than 1:10 000 or if the manuscript is of poor quality.

Consult NBGIC if in doubt regarding the expected accuracy of custom map data.

Use of Feature Index Keys

Procedure	<p>Use existing ETB Map File feature index keys to link user attributes to map features.</p> <p>Use an accepted and consistent procedure to assign custom index keys to new map features.</p>
Rationale	<p>Use of index keys permits map features to be reclassified or more finely classified without the necessity of modifying existing Feature Code structures (and hence editing the map file).</p>
Guidelines	<p>Consult NBGIC before establishing a custom indexing scheme to be used with ETB Map File features.</p> <p>Avoid the use of index keys which exceed 12 characters in length.</p>

Using ETB Map Files With Other Digital Map Products

The user may have occasion to merge or overlay ETB Map Files with other digital map products. Care must be taken to ensure that the integrity and quality of the individual map files is not compromised when this is done.

This section provides guidelines for using ETB Map Files with other digital map products.

NBGIC DTM Data Base

Content	<p>A Digital Terrain Model is a dense collection of points with X, Y, and Z coordinates captured so as to define a topographic surface shape.</p>
File Name	<p>The DTM Data Base files have the same geographic extent and names as the ETB Map Files but with the extension <i>.dtm</i>.</p>
Collection Density	<p>The points are collected approximately every 70 metres, or closer where terrain characteristics warrant.</p>

Spatial Framework	The DTM Data Base files conform to the following specifications:								
	<table> <tr> <td>Datum</td><td>ATS77</td></tr> <tr> <td>Projection</td><td>Stereographic Double</td></tr> <tr> <td>Resolution</td><td>1.0 metre (horizontal) 0.1 metre (vertical)</td></tr> <tr> <td>Nominal Scale</td><td>1:10 000</td></tr> </table>	Datum	ATS77	Projection	Stereographic Double	Resolution	1.0 metre (horizontal) 0.1 metre (vertical)	Nominal Scale	1:10 000
Datum	ATS77								
Projection	Stereographic Double								
Resolution	1.0 metre (horizontal) 0.1 metre (vertical)								
Nominal Scale	1:10 000								
Accuracy	The elevations have an absolute accuracy of approximately 2.5 metres except where the ground is obscured by dense forest.								
Combining with ETB Map Files	Since the DTM Data Base file and ETB Map File have the same spatial framework and extent, merging of the DTM file with the corresponding ETB file should present no problems.								
Further Information	Refer to Sections 5 and 6 of this guide for further information concerning the DTM Data Base.								

NBGIC Digital Property Map Data Base

Content	<p>NBGIC Digital Property Map (DPM) Files contain all property lines, including rivers, lakes, streams and coastline which form property boundaries.</p> <p>For conventional maps at a scale of 1:10 000 and 1:20 000, hydrographic features which form property boundaries were imported from the original ETB Map Files. At larger scales, these boundaries were captured by stream digitizing from the property manuscripts.</p>				
Map Window	Each DPM Map File window represents one Property Management Unit (MU). Management Units are irregular shaped polygons which follow property line boundaries. There are approximately 2000 parcels in a Management Unit.				
File Name	<p>DPM Map Files have a name of the form NB<i>ccnn</i>.NTX where:</p> <table> <tr> <td><i>cc</i></td><td>is a two digit County code</td></tr> <tr> <td><i>nn</i></td><td>is a two digit MU number within the County</td></tr> </table>	<i>cc</i>	is a two digit County code	<i>nn</i>	is a two digit MU number within the County
<i>cc</i>	is a two digit County code				
<i>nn</i>	is a two digit MU number within the County				

Spatial Framework	<p>The DPM Map Files conform to the following specifications:</p> <table><tr><td>Datum</td><td>ATS77</td></tr><tr><td>Projection</td><td>Stereographic Double</td></tr><tr><td>Resolution</td><td>0.05 metre (horizontal) 0.001 metre (vertical)</td></tr><tr><td>Nominal Scale</td><td>1:1000</td></tr></table>	Datum	ATS77	Projection	Stereographic Double	Resolution	0.05 metre (horizontal) 0.001 metre (vertical)	Nominal Scale	1:1000
Datum	ATS77								
Projection	Stereographic Double								
Resolution	0.05 metre (horizontal) 0.001 metre (vertical)								
Nominal Scale	1:1000								
Accuracy	<p>The accuracy of property lines digitized from manuscripts varies according to the accuracy of the original manuscript.</p> <p>The accuracy of property lines captured from original ETB Map Files is consistent with the ETB accuracy specifications.</p> <p>Refer to Appendix 1 of the <i>User Guide to The Digital Property Maps</i> for a discussion of data sources used to construct the DPM Map Files.</p>								
Combining with ETB Files	<p>DPM Map Files exist at a finer coordinate resolution than ETB Map Files. In order to avoid problems, the resolution of ETB Map Files should be changed to correspond to that of the DPM Map Files.</p> <p>DPM Map File windows are based on Management Unit boundaries and do not correspond to ETB Map File windows. If DPM Map Files are clipped at the neat line boundaries of the ETB Map Files, care must be taken to ensure that polygon labels for parcels along the neat line are moved into the clipped polygon residing within the ETB map sheet boundary.</p> <p>Combining DPM Map Files and ETB Map Files using the above procedures will require topology to be reconstructed within the resulting file if spatial analysis and/or attribute inquiry is to be conducted against the DPM Map File polygons.</p>								

Other Digital Products

There are numerous other digital spatial data base products which have the potential for use in combination with the NBGIC ETB Data Base. One of these is listed below. The user is cautioned that this list is not intended to be complete, nor does it describe the

product in detail. For more specific information, contact the agency responsible for maintenance.

FMB Data Base

The New Brunswick Department of Natural Resources and Energy maintains a Forest Management Branch (FMB) Data Base of forest stand boundaries within the province. Other features included within these files are resource roads, hydrography and wild life habitat. The window for individual FMB map files is identical to that for the ETB Map Files. Files can be provided in the same spatial framework as the ETB Data Base.

For more information concerning the FMB Data Base and its availability, contact Darrell Fowler, DNR&E at (506) 453-5598.

Joining ETB Map Files

Concepts

Rationale

It is often desirable to carry out GIS analysis using an area which exceeds the size of an individual ETB Map File window. When this situation occurs, adjacent map files may be joined to create a new map file with a larger spatial extent.

Continuous Data Base

Depending upon the GIS software employed, it may be possible to merely build a data base index which associates the adjoining files and maintains connectivity among them. This is sometimes referred to as *tiling*. In CARIS, this association is referred to as a *continuous data base*.

Single File

It may be necessary to merge all data from individual files into one new file with an expanded coverage area.

Size Considerations

Problem

When individual files are merged to create a new file, GIS software performance may degrade due to the increased file size and the number of map features within it.

Solutions

Unnecessary features may be removed from the file to reduce storage requirements.

The file resolution may be made more coarse. Note that this may cause problems with topological relationships. *This solution should only be used by experienced GIS users and only under certain conditions.*

Data Filtering

Definition	Data filtering is the systematic removal of unnecessary map features through the use of a search criteria based upon map feature attributes.
CARIS Users	<p>CARIS users can specify a data filter using the Display Parameter (DP) command. Features within the DP filter can be either included or excluded from subsequent operations.</p> <p>Once a DP filter is set, the CARIS REMOFEAT command can be used to delete the unwanted features.</p>
Example	If 20 ETB Map Files need to be combined to perform a transportation network analysis, features residing outside the Transportation Network Theme (100) are not required (except for orientation or cartographic output). All features residing on other Themes could be deleted, thus significantly reducing the size of the combined file.

Removal of Neat Lines

Concept	When ETB Map Files are merged into one new file, internal neat lines are no longer required on individual Themes in order to close area features.
Procedure	Portions of the neat lines required to close area features are coded as <i>virtual features</i> . These virtual features can be removed to obtain continuous polygons within the merged file.
Exception	The virtual feature code WA_V is used to separate different waterbody features (for example, lakes and double line rivers). These virtual features should <i>not</i> be removed.

Map Index Files and Vertical Data Bases

Concept	It is possible within some GIS packages to construct a <i>map index file</i> consisting only of polygons representing the
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boundaries of map sheets labelled with the file name of the individual ETB (or other) Map File which covers the area enclosed by each polygon. Selecting one of these polygons (or its associated label) will cause the software to “zoom in” to the individual map sheet and display its feature content. This process can be repeated through succeeding levels of detailed mapping, and is analogous to the use of insets on a hardcopy map.

Vertical Data Base	The implementation of index mechanisms which permit the user to start with an overview map and then progressively select map files of increasing detail is known as a <i>vertical data base</i> .
Purpose	A vertical data base design can avoid the need to store excessive feature detail at any one map scale (level). The user can work with only those features which are required to solve the specific problem.

Guidelines for Maintaining the ETB Data Base

Production Libraries

Concept	One set of ETB Data Base files is maintained in a central location on a map server which is accessible by all users. Files can be downloaded for local use but cannot be updated within the production library.
Rationale	All users have access to the same version of the files. Updating of individual ETB Map Files can be controlled using a “Check In/Check Out” procedure.

CARIS File Size Considerations

Concept	Maintain production ETB Map Files in CARIS NTX file format. Create CARIS Edit files only when needed for analysis.
Rationale	CARIS NTX files require significantly less storage than CARIS Edit files (approximately half).
Caution	CARIS NTX files do not contain topology. This procedure should only be used by experienced CARIS users since

topology will have to be recreated when CARIS EDIT files are required.

Minimizing Customization of ETB Map Files

Concept	<p>Avoid customization of ETB Map Files unless required for your application.</p> <p>Isolate custom changes on a separate Theme which can be easily reloaded when a subsequent update to the ETB Map File is received.</p>
Rationale	<p>This approach minimizes the amount of cartographic editing required to maintain agency base maps.</p>

Section 5 Contents of the DTM Map Files

Introduction

This section deals with the contents and organization of the Digital Terrain Model (DTM) Map Files. It defines the terms, explains the format of the files which comprise the database, and describes the presentation of the data.

About the DTM Data Base

The DTM Data Base is one of the two components of the Digital Topographic Data Base. *(The other component is the Enhanced Topographic Base - ETB Data Base).* Refer to Sections 2 through 4 of this guide for further information concerning the ETB Data Base.

The DTM Data Base is composed of 1893, 1:10 000 files that correspond in geographic extent, to the 1:10 000 files of the ETB Data Base.

The DTM Data Base is available from the New Brunswick Geographic Information Corporation. It may be ordered along with the ETB Data Base. Refer to Section 7 of this guide for information on how to order DTM Data Base Files.

The DTM Data Base is a digital representation of elevations throughout the province of New Brunswick, organized into DTM Map Files.

Definitions

Check Points	Elevations read throughout the file to provide an independent check of the DTM and / or generated contours.
DTM	A Digital Terrain Model is a dense collection of points, with x, y, and z coordinates that define the earth's surface.
Mass Points	Mass points are the individual elevation points of the DTM.
Spot Height	A spot height is an elevation read at a location suitable for cartographic purposes.

About Source Identifiers

Definition Source Identifier or Source ID is a CARIS software feature. A Source ID is an alphanumeric code 12 characters in length, used to indicate the source of data or other information pertinent to the data.

Conventions The Source ID indicates the photogrammetric model from which the data was derived in the first 4 characters and the agency responsible for the creation of the data, in the remaining 8 characters. For example:

4916____LRIS is model number 4916 created by the Land Registration Information Service;

4324_GEOPLAN is model number 4324 created by Geoplan;

8142GEOMACAD is model number 8142 created by Geomacadie.

The Source ID can be changed without affecting the geometric representation.

About Theme / User Numbers

Definition A Theme / User number is a CARIS software feature which allows features to be grouped together and accessed by a number. The Theme / User number is important in the topological processing of the data.

Theme/User Number 50 For the purposes of the DTM files, only Theme / User Number 50 is used.

About Feature Codes

Definition A Feature Code is a alphanumeric code of up to 12 characters used to identify the attributes of each feature within a GIS database.

Contents There are established conventions for the coding of topographic features. By reading the Feature Code you will be able to determine:

- the classification of the feature
- certain attributes of the feature

Table 5-1 indicates the Feature Codes to be found in a DTM file.

Table 5-1 Feature Code Classifications and Descriptions	
Feature	Description
LFTM	LFTM is short form for Land Feature Terrain Model; a DTM mass point is an LFTM.
LFCK	LFCK is short form for Land Feature Check Point; a DTM check point is an LFCK.
LFSH	LFSH is short form for Land Feature Spot Height; a DTM spot height is an LFSH.
LFTMDG	LFTMDG is short form for Land Feature Terrain Model Digitized Gap, and are mass points that have been digitized from orthophoto maps due to poor photography.
DLNLIN	DLNLIN is short form for DeLimiter Neat Line Inner; the Neat Line is a DLNLIN.
DLID30	File Name

About the Spatial Framework

Framework

The Digital Terrain Model Data Base data conforms to the following specifications:

Datum	ATS77
Projection	Stereographic Double
Resolution (x,y)	1.0 metre
Resolution (z)	0.1 metre
Nominal Scale	1:10 000

About Logical Consistency

The DTM Map Files consist of a number of point type elevation values surrounded by a map neat line. No topological structure applies to this data. The neat line forms a geometrically closed polygon completely enclosing the DTM points.

Section 6 Working With The DTM Data Base

Introduction

This section provides explanations and guidelines for working with Digital Terrain Model Data Base data.

Characteristics of DTMs

DTM Map
File Names

File names for the individual DTM Data Base Map Files are consistent with the new naming conventions for the DTDB Data Base as of version ETB96. Specifically, DTM Map Files will have a name in the format:

aaaabbbb.DTM

where

aaaa is the North latitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree

bbbb is the West longitude of the SE window corner, expressed as a 4-digit integer number in decimal degrees to the nearest 0.01 degree.

Example: 46006690.DTM

Geographic
Extent

As indicated previously, these files have the same geographic extent as ETB Map Files.

Typical File Sizes

File Size 365 000 bytes in a CARIS ASCII format

Number Of Points 25 000 (approximately)

Data Collection Practices

The DTM data exhibits two forms of stereo-model compilation.

Early Procedure This procedure saw the collection of DTM points following the contours of the terrain. This results in irregularly shaped lines of DTM points. Where the terrain is flat or gently sloped, gaps appear in the DTM coverage. Where the terrain is steep, the coverage may be significantly more dense. There are a relatively small number of files collected in this manner. (See Figure 6-1)

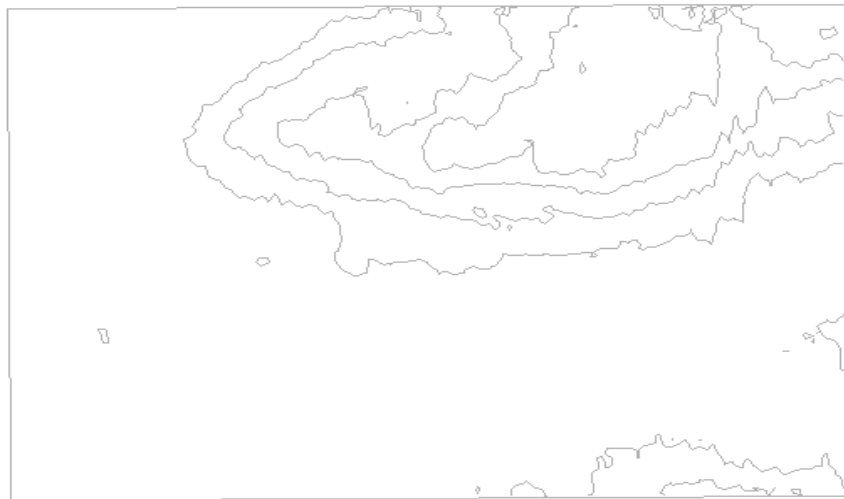


Figure 6-1: DTM points following the contours of the terrain

Current Procedure Most DTM data in the province was collected following regularly spaced profile lines. See Figure 6-2



Figure 6-2: DTM points following regularly spaced profile lines

Collection Density The points are collected approximately every 70 metres, or closer where terrain characteristics warrant. The exceptions are the files collected following terrain contours as explained above. See Figure 6-3.

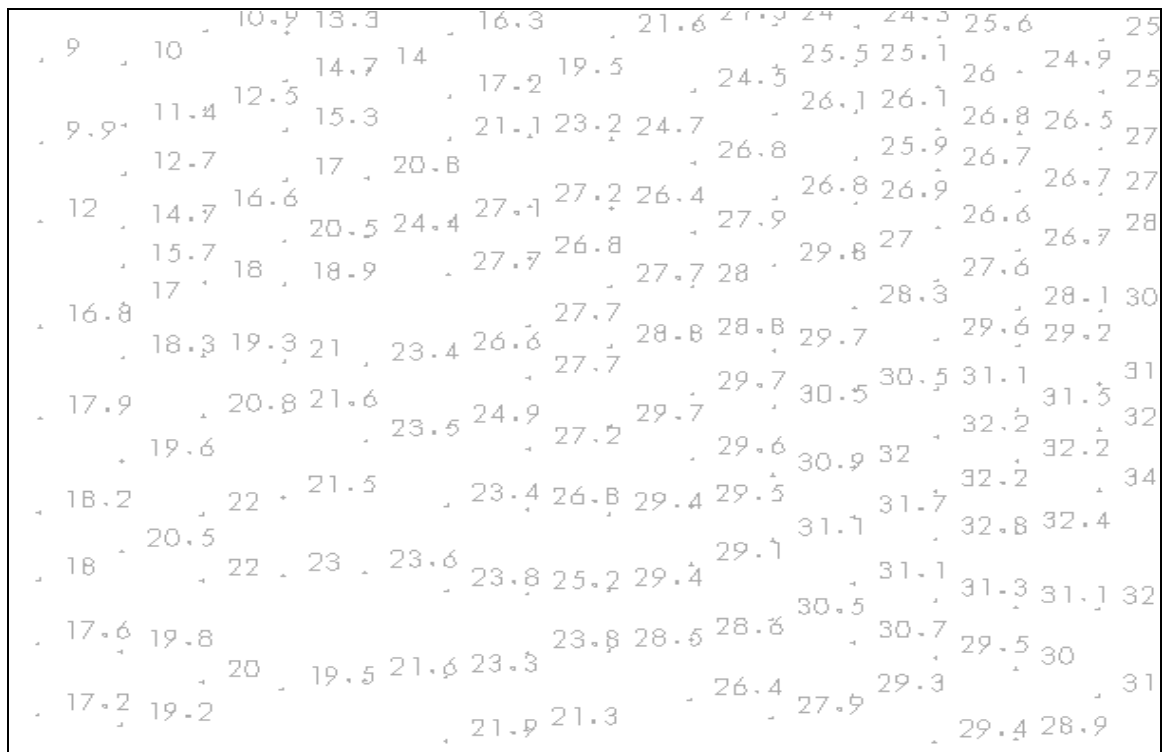


Figure 6-3: Typical Data Density of Regular Terrain

Accuracy

In areas of good ground visibility, ninety percent of all discrete spot heights and DTM points (mass points, etc.) are accurate to within 2.5 metres of their true elevation. In areas where there is significant vegetation, the measurements will be less accurate.

Ninety percent of all well defined planimetric features are accurate to within 2.5 metres of their true position.

Working with the Spatial Framework

Guideline	When merging data from other sources, be sure that the datum, the projection, and the resolution are the same. Otherwise, the topography will not be a correct representation.
Combining DTMs with the corresponding ETBs	<p>The DTM Map Files and ETB Map Files have the same spatial framework. Use appropriate GIS software to merge the files.</p> <p>Breakline information was not collected with the DTM Map Files or the ETB Map Files. If you are interested in deriving elevations along hydrographic features, eg rivers, the following procedure could be followed:</p> <ul style="list-style-type: none">• build the Triangular Irregular Network (TIN)• drape the ETB over the TIN• match the ETB location with its corresponding TIN elevation• transfer the TIN elevation to the feature in the ETB Map File (Your GIS software may offer you the ability to derive these values)

Working with File Resolution

Guideline	The resolution of data in the DTM Map File is 1.0 metre in X and Y and 0.1 metre in Z. If you bring the data to a coarser resolution the positions of graphic elements in the file may change slightly with respect to each other.
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Geometric Effects in DTM Data

Ridging Effects	"Ridging" occurs in a large number of DTM Map Files. This is thought to be a systematic error caused by the method of data collection in the initial stereo-model compilation. The effect is most pronounced in 3-Dimensional
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perspective views where it is manifested as a series of furrows cut through the model in the direction of the mass point profiles. The crest and trough of each furrow corresponds with adjacent DTM point profile lines. The ridges are less than 10 metres in height. See Figure 6-4. If ridging is a problem for a particular application, consult your GIS software vendor.

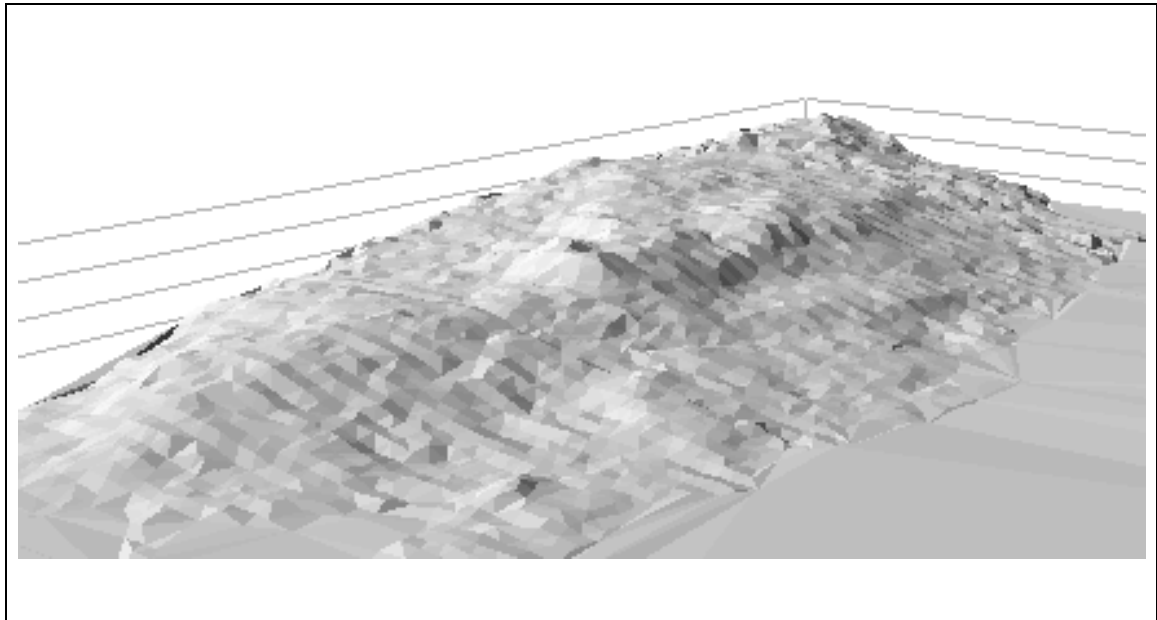


Figure 6-4: Example of Ridging

Data Gaps

Gaps in DTM Files are defined here as areas void of elevation values in the DTM coverage that are larger than would be expected by the specified 70 metre point spacing. Legitimate gaps occur in the DTM data for two reasons:

- DTM points are excluded from areas defined by the exclusion area feature codes in Appendix A. These are areas such as bodies of water, pits and man made structures.
- DTM points may be absent from areas of flat or evenly sloped terrain. In these areas a linear interpolation of the ground elevation from the surrounding DTM points would produce an elevation within the accuracy specification.

In some cases, gaps in DTM Files were identified that were a result of problems with the original photography. Since these gaps were outside of specifications, the gaps were filled in with data digitized

from orthophoto contour maps. The digitized points were given the Feature Code of LFTMDG.

**Points in Exclusion
Areas**

Generally, there are no points in exclusion areas. However, there are cases, due to production methods, where the DTM point may be up to 1 metre inside an area of exclusion.

Section 7 Ordering the Digital Topographic Data Base

Introduction

This section contains information on how to order Digital Topographic Data Base (DTDB) files to suit your applications.

Preparing to Order

Need-to-Know	<p>Prior to ordering Digital Topographic Data Base files, you must select:</p> <ul style="list-style-type: none">• the media (for example, CD-ROM, Internet Browser download, or diskette)• the file name (s)• the NBGIC office for placing the order (unless files are to be downloaded from the NBGIC Internet Browser)
How to Order	<p>There are two basic methods by which DTDB data may be ordered:</p> <ul style="list-style-type: none">• by placing an order through an NBGIC Office• by directly downloading DTDB files through the NBGIC Internet Browser <p>Each of these methods is further described within the following sections.</p>
NBGIC Office Orders	<p>You should order your DTDB data through an NBGIC Office if:</p> <ul style="list-style-type: none">• you are ordering more than 10 files• you would like to receive the data on CD-ROM or diskette• you don't have access to the NBGIC Internet Browser service
NBGIC Internet Browser Orders	<p>You should order your DTDB data through the NBGIC Internet Browser if:</p> <ul style="list-style-type: none">• you are ordering 10 files or less

- you have access to the NBGIC Internet Browser service
- you need the data quickly

Ordering DTDB Files from an NBGIC Office

Overview	Data for all or any part of the province can be ordered from any NBGIC Office. Data for the entire province on CD-ROM can be ordered from selected NBGIC offices. Addresses and telephone numbers of the NBGIC offices are provided in Section 9 of this Guide, along with an order form. Orders may be placed by telephone, fax, mail or in person.
Licensing Agreement	After your order has been processed, the DTDB Data Base files will be sent to you along with a licensing agreement which must be signed and returned to the NBGIC within ten days.
Price List	The cost of acquiring DTDB files shall be in accordance with the Price List established by the NBGIC.
Need-to-Do	Read the rest of this section for information about each step for ordering DTDB files. Then complete the order form at the end of Section 9 and mail, fax or deliver it to your local NBGIC office.
Choosing Media	<p>The NBGIC supplies DTDB Data Base files on certain media. If coverage for the entire province is requested, the data will normally be provided on CD-ROM. Table 7-1 lists the most common computer operating systems and suggests which media should be chosen when ordering data. Please note that this list is not comprehensive. If you have other software, contact the Director of the NBGIC Office of your area, to discuss your requirements.</p> <p>After reading Table 7-1 select the appropriate media for your hardware and software configuration.</p>

TABLE 7-1: SELECTING MEDIA FOR DTDB DATA BASE FILES		
If your computer operating system is...	And you want file coverage for...	Then order on...
MS-DOS	Province	CD-ROM
	Other area	DOS-Diskette
Windows 3.1, Windows 95, Windows NT	Province	CD-ROM
	Other area	DOS-Diskette
UNIX	Province	CD-ROM
	Other area	DOS-Diskette
VMS (DEC)	Province	CD-ROM
	Other area	DOS-Diskette

Note Contact your nearest NBGIC office (see Section 9) if you wish to check the availability of other media for file transfer. In some instances it may be possible to receive data for specific project areas on CD-ROM.

Supported GIS Formats DTDB files are supplied in compressed .zip format by map window. Each .zip file contains both ETB and DTM map files in CARIS ASCII and DXF formats. Non CARIS users will normally require the DXF format files for processing.

Other GIS Format In some cases, NBGIC may be able to supply DTDB files in other GIS formats. Contact your nearest NBGIC office (see Section 9) for further details.

Ordering DTDB Files through the NBGIC Internet Browser

Background The New Brunswick Geographic Information Corporation provides an Internet Browser service through a World Wide Web (WWW) site. This service was initially established in 1996 to provide convenient access to Digital Property Map data. It is now possible to use this service to download DTDB files.

Prerequisites In order to use the NBGIC Internet Browser you must:

- have Internet WWW browser software installed on your computer
- have access to an Internet Service Provider (ISP) from your computer, either directly through a modem or through a computer network direct connection
- have an NBGIC Internet Browser account

WWW Browsers Supported

The following WWW browser packages have been tested and verified to operate correctly with the NBGIC Internet Browser DTDB File Download function.:

- Microsoft Internet Explorer, Versions 3.0 and 4.0
- Netscape Navigator and Netscape Navigator Gold, Version 3.0

Users having earlier releases of the above packages are encouraged to upgrade their software.

NBGIC Browser Account

If you currently have an NBGIC Internet Browser Account for access to the Real Property Information, this account may also be used to download DTDB files. If you do not currently have an account, you will need to apply for one in order to access the DTDB download service. You may obtain the application form and other details concerning this service by:

- calling Customer Support at: (506) 856-3704
- sending an E-mail message to: pallain@nbnet.nb.ca

Costs

Users downloading DTDB files will incur two categories of costs:

- connect time charges which are assessed by your Internet Service Provider
- a flat rate fee of \$25 per DTDB file window which is automatically calculated and assessed by the NBGIC Internet Browser service

Note

It should be noted that there is no volume discount at present if more than 10 DTDB files are ordered through the NBGIC Internet

Browser service. Users requiring more than 10 DTDB files may wish to order these files through an NBGIC office in order to receive a volume discount.

Current information regarding the cost structure for DTDB files may be obtained from the NBGIC WWW site:

<http://www.gov.nb.ca/NBGIC/sale.htm>

Select Digital Topographic Database from the list of products and services at the top of this Web page.

Downloading DTDB Files

WWW Site	DTDB files may be downloaded from the NBGIC Internet Browser www site: http://caris0.universal.ca/NBGIC/
User Name and Password	You will be requested to provide the User Name and Password supplied by NBGIC Customer Support when you connect to the Internet Browser site.
Selecting DTDB File Download	From the Internet Browser Home Page, select <u>Digital Topographic Data Base</u> . From this page, select <u>Download DTDB Files</u> .
Licence Agreement	You will be presented with a Licence Agreement page at this point. You may choose to either <u>ACCEPT</u> this agreement to proceed with the file download, or <u>CANCEL</u> .
File Selection Options	You may select the individual DTDB map windows to be downloaded in one of two ways: <ul style="list-style-type: none">• <u>Graphic Selection</u> will allow you to select individual map windows by clicking on them with the mouse cursor• <u>Non-Graphic Selection</u> will permit you to enter a list of map file names
Graphic Selection	You will be presented with a provincial map. To select individual files:

- use the mouse cursor to center the map on your general area of interest (for example, Fredericton)
- select the Map Scale of the files to be downloaded - this will cause the Map Index windows and map names to be displayed
- ZOOM IN (X 10 recommended initially) to the area of interest, unless the 1:250 000 DTDB files are to be downloaded
- use the ZOOM IN, PAN or ZOOM OUT buttons to further refine your area of interest
- select individual map windows by clicking the mouse cursor within the map window desired
- when all desired files have been selected, click on the *Proceed with File Download* button at the bottom left of the page

Non-Graphic Selection

This selection mode permits the use to directly enter DTDB files by entering the map names to a list. Simply follow the instructions on this page to specify the required files.

When all desired files have been entered, click on the *Cost and Download* button at the bottom left of the page.

Note that users who have selected files using Graphic Selection will be presented with this page also, with the files previously selected being displayed within the ADD window.

Proceeding with Download

The cost of downloading the selected files will be displayed, along with the total file size. To proceed with the download, click on the *Proceed* button. Another page will be presented. Click within the [\[HERE\]](#) text to commence download of the files.

At this point, you will be prompted to indicate the directory on your computer where the downloaded files are to be stored.

Status of Download

As the files are downloaded, status information will be presented. Both Microsoft Internet Explorer and Netscape Navigator will display the status of the download in a file download popup window.

**Completion of
Download**

Once the file download has been completed, the user will be notified. This notification will vary depending on the Browser being used:

- Microsoft Internet Explorer will close the File Download popup window and display the message "Download complete" in an information popup window.
- Netscape Navigator will display the message "Document done" in the status bar at the bottom of the screen. As well, the file download status window will be closed.

Hints

The following points should be kept in mind when planning to download DTDB files using the NBGIC Internet Browser:

- The compressed .zip files are typically quite large - most are greater than 500 kilobytes in size, and some will exceed 1 megabyte. Avoid downloading too many files at once - a reasonable upper limit would be 5 megabytes.
- You must ensure that there is sufficient room on your local hard drive to store the downloaded files. The software does *not* check this prior to download.
- It is probably not practical to download multiple files in one session unless your modem speed rating is at least 28.8 kb.
- Each file downloaded is a *compressed* file which contains six (6) individual files (see Section 1 for a description of these files). You must ensure that you have sufficient space on your computer disk to contain the unpacked files. Typical compression ratios for DTDB .zip files may range from 5:1 to 7:1. This means that a downloaded megabyte DTDB file may require as much as 7 megabytes of *additional* disk space when uncompressed.
- The DTDB compressed files were created with the PKZIP utility program. This utility may be downloaded through a link on the NBGIC Internet Browser DTDB Support Files page:

http://caris0.universal.ca/NBGIC/docs/topo_support.html

PKZip is a DOS utility. Windows users can alternatively use the WinZip utility program to uncompress the files. An evaluation version is available for download from the WinZip home page (www.winzip.com).

- If for some reason, your download fails, the same files can be downloaded again provided the download take place before 12 p.m. the same day.

Section 8 Client Profile Form

Introduction

This section contains the Client Profile Form and provides instructions on how to complete it. It is intended primarily for use by clients who order DTDB data from an NBGIC office. However, users of the NBGIC Internet Browser are also encouraged to complete this form and forward it to the nearest NBGIC office.

Purpose	The intent of this form is to help the NBGIC improve methods of Digital Topographic Data Base file transfer from platform to platform by being aware of the equipment on which you work. Please send the form along with your first order for DTDB files. The form will be filed and need only be filled in again if you change your equipment or software.
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Completing the Form

Type of computer	State the type of computer (for example, SUN SPARC workstation) and operating system (for example, UNIX, Windows NT, Windows 95). If more than one computer type is used, please list each.
Exchange Media	Mention the type and capacity of your exchange media hardware used to load external data files.
Software	List the GIS/mapping software which you intend to use for processing the DTDB Map Files (for example, CARIS, Arc/Info, AutoCAD) and the RDBMS software which you intend to use for storage of the ETB Attribute Files (for example, dBASE, INGRES, ORACLE). Include the version number for each of these software products.

CLIENT PROFILE

Name of Organization _____

Address _____

Telephone _____

Technical Manager _____

Principal Business _____

Computer Information

Brand	Operating System

Exchange Media Hardware

	Diskette	Tape	CD-ROM
Type			
Capacity			

Software

	GIS/Mapping System	Relational Database Management System
Name		
Version		

Section 9 NBGIC Offices

This section lists the address and telephone number for each of the NBGIC Offices. The section also includes an order form for Digital Topographic Data Base Files.

NOTES:

- 1) The Area Code for all telephone and fax numbers within Table 9-1 below is 506.
- 2) The information within Table 9-1 is subject to ongoing change. For the most current information on NBGIC offices and contacts (including E-mail addresses if available), consult the "How To Find Us" page of the NBGIC web site. The address of this page is as follows:

English: <http://www.gov.nb.ca/NBGIC/findus.htm>

French: <http://www.gov.nb.ca/fgic/ffindus.htm>

TABLE 9-1: NBGIC OFFICES AND CONTACTS					
REGION	COUNTIES IN REGION	ADDRESS	TEL.	FAX.	MANAGER CUSTOMER SERVICE
Chaleur	Gloucester Northumberland Restigouche	161 Main Street Suite 201 Bathurst, NB E2A 1A6	547- 2090	547- 2925	Gille Godin
Valley	Carleton Madawaska Queens Sunbury Victoria York	77 Westmorland St. Frederick Square Suite 250 Fredericton, NB E3B 6Z3	453- 3390	444- 5030	Alan Roy
Beauséjour	Albert Kent Westmorland	3rd Floor 633 Main Street Moncton, NB E1C 8R3	856- 3303	856- 2609	Denise Trowsdale
Fundy	Charlotte Kings Saint John	15 King Square North 2nd Floor Saint John, NB E2L 1E6	643- 6028	658- 2156	George Schurman

DIGITAL TOPOGRAPHIC DATA BASE (DTDB) ORDER FORM

Client Information**Date:** _____

Name of Organization: _____

Address: _____

Telephone: _____

Contact Person: _____

Digital Topographic Data Base File InformationMedia (*check appropriate box*)☐ CD-ROM ☐ DOS-Diskette☐ Other (specify - contact NBGIC office for available options):
_____DTDB Support Files (*check appropriate box*)☐ I have Internet access and can download these files☐ I do not have Internet access. Please provide these files on the media selected above.

Intended use of DTDB File(s) _____

Description of Area and File Names Required:

☐ Entire Province (*NOTE: Only available on CD-ROM*)☐ Others (specify): _____

Send the completed form to the appropriate NBGIC Office nearest you.

APPENDIX A Frequently Asked Questions (FAQ)

This Appendix provides a list of common questions concerning the Digital Topographic Data Base along with responses to these questions.

Q1. Where can I order the Digital Topographic Data Base?

A1. The Digital Topographic Data Base may be ordered from the nearest NBGIC office. Refer to Section 9 of the Guide for a list of these offices. DTDB files may also be downloaded through the NBGIC Internet Browser. Refer to Section 7 of the Guide for instructions.

Q2. Can I order files for a specific project area, or do I have to order the complete provincial coverage?

A2. You can order files for a specific area. The Digital Topographic Data Base (DTDB) Order Form on page 9-3 of the Guide contains a section for you to describe the area required. You may also specify individual files through the NBGIC Internet Browser.

Q3. I am not a CARIS user. Can I order DTDB files in a format compatible with my GIS software?

A3. At this time, NBGIC supplies DTDB files in CARIS ASCII and DXF (AutoCAD) formats. However, it may be possible to arrange for private sector firms to supply DTDB files in other GIS formats. Contact your local NBGIC office to discuss this matter.

Q4. Are the DTDB files "GIS ready"?

A4. No. CARIS ASCII files will need to be processed by the REFOASCII utility prior to GIS use. Files supplied in DXF format will need to have topology built for the Transportation and Hydrography Themes within your GIS prior to use.

It is further noted that *only* the Transportation and Hydrography Themes have been structured for GIS use. All other data will need structuring prior to use for GIS analysis.

Refer to Section 2 of the Guide for more information on the content of the ETB Map files, and to Section 6 for more information on the content of the DTM Map Files.

Q5. Can I order only the data themes I need, or must I order the entire set of features for each coverage area?

- A5.** ETB Map Files contain all features within the .Tyy files. If individual thematic groups are not required, they must be deleted by the user. Similarly, DTM Map Files contain all DTM Features. Note that the ETB Data Base and the DTM Data Base may be ordered separately.
- Q6.** Do I need to order both ETB Data Base and DTM Data Base files for a project area?
- A6.** Both ETB Data Base and DTM Data Base files are included within the DTDB compressed files supplied for each map window ordered.
- Q7.** I don't currently have Internet access on my computer. How can I obtain the DTDB Support Files?
- A7.** Consult your nearest NBGIC Office to make arrangements to obtain the DTDB Support Files on alternate media.

APPENDIX B ETB Data Base Feature Codes

The following table presents a list of the valid Feature Codes which may be present within the ETB Data Base, along with a description and the topological status of each Feature.

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
ARSY	ARROW SYMBOL	NONE
BLAR	ARENA SYMBOL	NONE
BLAROL	ARENA OUTLINE	NONE
BLBS	BUILDING SYMBOL	NONE
BLBS03	BUILDING SYMBOL UNDER CONSTRUCTION	NONE
BLBS04	BUILDING SYMBOL RUIN	NONE
BLBS05	BUILDING SYMBOL APPROXIMATE	NONE
BLBS06	BUILDING SYMBOL UNDERGROUND	NONE
BLCC	COMMUNICATIONS CENTRE SYMBOL	NONE
BLCCOL	COMMUNICATIONS CENTRE OUTLINE	NONE
BLCH	CHURCH SYMBOL	NONE
BLCHOL	CHURCH OUTLINE	NONE
BLCHSY	CHURCH SYMBOL LARGE	NONE
BLDG	BUILDING OUTLINE	NONE
BLDG03	BUILDING UNDER CONSTRUCTION	NONE
BLDG04	BUILDING RUIN	NONE
BLDG05	BUILDING INDEFINITE/APPROXIMATE	NONE
BLDG06	BUILDING UNDERGROUND	NONE
BLDG30	BUILDING TEXT	NONE
BLFA	FACTORY SYMBOL	NONE
BLFAOL	FACTORY OUTLINE	NONE
BLFS	FIRE STATION	NONE
BLFSOL	FIRE STATION OUTLINE	NONE
BLFSSY	FIRE STATION SYMBOL	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
BLFTOL	FORT OUTLINE	NONE
BLGH	GREEN HOUSE SYMBOL	NONE
BLGHOL	GREEN HOUSE OUTLINE	NONE
BLHO	HOSPITAL	NONE
BLHOOL	HOSPITAL OUTLINE	NONE
BLHOSY	HOSPITAL SYMBOL	NONE
BLLB	LEGISLATURE BUILDING	NONE
BLLI	LIBRARY SYMBOL	NONE
BLLIOL	LIBRARY OUTLINE	NONE
BLMU	MUSEUM	NONE
BLMUOL	MUSEUM OUTLINE	NONE
BLPO	POST OFFICE	NONE
BLPOOL	POST OFFICE OUTLINE	NONE
BLPOSY	POST OFFICE SYMBOL	NONE
BLPS	POLICE STATION SYMBOL	NONE
BLPSOL	POLICE STATION OUTLINE	NONE
BLPSSY	POLICE STATION SYMBOL	NONE
BLPU	PUMPING STATION SYMBOL	NONE
BLPUOL	PUMPING STATION OUTLINE	NONE
BLSC	SENIOR CITIZENS SYMBOL	NONE
BLSCOL	SENIOR CITIZENS OUTLINE	NONE
BLSH	SCHOOL SYMBOL	NONE
BLSHOL	SCHOOL OUTLINE	NONE
BLSHSY	SCHOOL SYMBOL LARGE	NONE
BLTH	TOWN HALL SYMBOL	NONE
BLTHOL	TOWN HALL OUTLINE	NONE
DAAD	AMMUNITION DUMP CENTROID	NONE
DAAD10	AMMUNITION DUMP LEFT	NONE
DAAD20	AMMUNITION DUMP RIGHT	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DAAP	AIRPORT CENTROID	NONE
DAAP10	AIRPORT LEFT	NONE
DAAP20	AIRPORT RIGHT	NONE
DAAP30	AIRPORT TEXT	NONE
DAAS	AIRSTRIP CENTROID	NONE
DAAS02	AIRSTRIP UNPAVED	NONE
DAAS11	AIRSTRIP LEFT PAVED	NONE
DAAS12	AIRSTRIP LEFT UNPAVED	NONE
DAAS21	AIRSTRIP RIGHT PAVED	NONE
DAAS22	AIRSTRIP RIGHT UNPAVED	NONE
DAAS30	AIRSTRIP TEXT	NONE
DAASSY	AIRSTRIP SYMBOL	NONE
DABU	BUILT UP AREA CENTROID	NONE
DABU10	BUILT UP AREA LEFT	NONE
DABU20	BUILT UP AREA RIGHT	NONE
DACG	CAMPGROUND CENTROID	NONE
DACG10	CAMPGROUND LEFT	NONE
DACG20	CAMPGROUND RIGHT	NONE
DACGSY	CAMPGROUND SYMBOL	NONE
DACM	CEMETERY CENTROID	NONE
DACM10	CEMETERY LEFT	NONE
DACM20	CEMETERY RIGHT	NONE
DACMSY	CEMETERY SYMBOL	NONE
DADI	DRIVE IN THEATRE CENTROID	NONE
DADI04	DRIVE IN THEATRE ABANDONED	NONE
DADI10	DRIVE IN THEATRE LEFT	NONE
DADI14	DRIVE IN THEATRE LEFT ABANDONED	NONE
DADI20	DRIVE IN THEATRE RIGHT	NONE
DADI24	DRIVE IN THEATRE RIGHT ABANDONED	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DADISY	DRIVE IN THEATRE SYMBOL	NONE
DADP	DISPOSAL PILE CENTROID	NONE
DADP10	DISPOSAL PILE LEFT	NONE
DADP20	DISPOSAL PILE RIGHT	NONE
DADPSY	DISPOSAL PILE SYMBOL	NONE
DADR10	GOLF DRIVING RANGE LEFT	NONE
DADR20	GOLF DRIVING RANGE RIGHT	NONE
DADU	DUMP CENTROID	NONE
DADU10	DUMP LEFT	NONE
DADU20	DUMP RIGHT	NONE
DADUSY	DUMP SYMBOL	NONE
DADY	DOCKYARD CENTROID	NONE
DADY02	DOCKYARD UNPAVED	NONE
DADY11	DOCKYARD LEFT PAVED	NONE
DADY12	DOCKYARD LEFT UNPAVED	NONE
DADY21	DOCKYARD RIGHT PAVED	NONE
DADY22	DOCKYARD RIGHT UNPAVED	NONE
DAEX	EXHIBITION GROUNDS CENTROID	NONE
DAEX10	EXHIBITION GROUNDS LEFT	NONE
DAEX20	EXHIBITION GROUNDS RIGHT	NONE
DAEXSY	EXHIBITION GROUNDS SYMBOL	NONE
DAFF	FUR FARM CENTROID	NONE
DAFF10	FUR FARM LEFT	NONE
DAFF20	FUR FARM RIGHT	NONE
DAFH	FISH HATCHERY CENTROID	NONE
DAFH04	FISH HATCHERY ABANDONED	NONE
DAFH10	FISH HATCHERY LEFT	NONE
DAFH14	FISH HATCHERY LEFT ABANDONED	NONE
DAFH20	FISH HATCHERY RIGHT	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DAFH24	FISH HATCHERY RIGHT ABANDONED	NONE
DAFHSY	FISH HATCHERY SYMBOL	NONE
DAFT	FERRY TERMINAL CENTROID	NONE
DAFT10	FERRY TERMINAL LEFT	NONE
DAFT20	FERRY TERMINAL RIGHT	NONE
DAFT30	FERRY TERMINAL TEXT	NONE
DAFTSY	FERRY SYMBOL	NONE
DAGC	GOLF COURSE CENTROID	NONE
DAGC10	GOLF COURSE LEFT	NONE
DAGC20	GOLF COURSE RIGHT	NONE
DAGCSY	GOLF COURSE SYMBOL	NONE
DAGM10	GAME MANAGEMENT AREA LEFT	NONE
DAGM20	GAME MANAGEMENT AREA RIGHT	NONE
DAGM30	GAME MANAGEMENT AREA TEXT	NONE
DAHP	HELIPORT CENTROID	NONE
DAHP02	HELIPORT UNPAVED	NONE
DAHP11	HELIPORT PAVED LEFT	NONE
DAHP12	HELIPORT UNPAVED LEFT	NONE
DAHP21	HELIPORT PAVED RIGHT	NONE
DAHP22	HELIPORT UNPAVED RIGHT	NONE
DAHS	HISTORIC SITE CENTROID	NONE
DAHS10	HISTORIC SITE LEFT	NONE
DAHS20	HISTORIC SITE RIGHT	NONE
DAHS30	HISTORIC SITE TEXT	NONE
DAHSSY	HISTORIC SITE SYMBOL	NONE
DAIR10	INDIAN RESERVE LEFT	NONE
DAIR20	INDIAN RESERVE RIGHT	NONE
DAIR30	INDIAN RESERVE TEXT	NONE
DALF	LANDFILL SITE CENTROID	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DALF10	LANDFILL SITE LEFT	NONE
DALF20	LANDFILL SITE RIGHT	NONE
DALFSY	LANDFILL SITE SYMBOL	NONE
DALM	LUMBER MILL CENTROID	NONE
DALM10	LUMBER MILL LEFT	NONE
DALM20	LUMBER MILL RIGHT	NONE
DALO	SCENIC LOOKOUT CENTROID	NONE
DALO02	SCENIC LOOKOUT UNPAVED	NONE
DALO11	SCENIC LOOKOUT LEFT PAVED	NONE
DALO12	SCENIC LOOKOUT LEFT UNPAVED	NONE
DALO21	SCENIC LOOKOUT RIGHT PAVED	NONE
DALO22	SCENIC LOOKOUT RIGHT UNPAVED	NONE
DAMN	MINE/OPEN PIT CENTROID	NONE
DAMN04	MINE/OPEN PIT ABANDONED	NONE
DAMN10	MINE/OPEN PIT LEFT	NONE
DAMN14	MINE/OPEN PIT LEFT ABANDONED	NONE
DAMN20	MINE/OPEN PIT RIGHT	NONE
DAMN24	MINE/OPEN PIT RIGHT ABANDONED	NONE
DAMNSY	MINE SYMBOL	NONE
DAMNUG	MINE UNDERGROUND CENTROID	NONE
DAMNUG04	MINE UNDERGROUND ABANDONED	NONE
DAMNUG10	MINE UNDERGROUND LEFT	NONE
DAMNUG14	MINE UNDERGROUND LEFT ABANDONED	NONE
DAMNUG20	MINE UNDERGROUND RIGHT	NONE
DAMNUG24	MINE UNDERGROUND RIGHT ABANDONED	NONE
DAMNUGSY	MINE UNDERGROUND SYMBOL	NONE
DAMP	MOBILE HOME PARK CENTROID	NONE
DAMP10	MOBILE HOME PARK LEFT	NONE
DAMP20	MOBILE HOME PARK RIGHT	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DAMPSY	MOBILE HOME PARK SYMBOL	NONE
DAMR10	MILITARY RESERVE LEFT	NONE
DAMR20	MILITARY RESERVE RIGHT	NONE
DAMR30	MILITARY RESERVE TEXT	NONE
DAPA	PARKING AREA CENTROID	NONE
DAPA01	PARKING AREA PAVED	NONE
DAPA02	PARKING AREA UNPAVED	NONE
DAPA11	PARKING AREA LEFT PAVED	NONE
DAPA12	PARKING AREA LEFT UNPAVED	NONE
DAPA21	PARKING AREA RIGHT PAVED	NONE
DAPA22	PARKING AREA RIGHT UNPAVED	NONE
DAPACP	CAR POOL PARKING CENTROID	NONE
DAPACP02	CAR POOL PARKING UNPAVED	NONE
DAPACP11	CAR POOL PARKING LEFT PAVED	NONE
DAPACP12	CAR POOL PARKING LEFT UNPAVED	NONE
DAPACP21	CAR POOL PARKING RIGHT PAVED	NONE
DAPACP22	CAR POOL PARKING RIGHT UNPAVED	NONE
DAPASY	PARKING AREA SYMBOL	NONE
DAPC	PEAT CUTTING CENTROID	NONE
DAPC10	PEAT CUTTING LEFT	NONE
DAPC20	PEAT CUTTING RIGHT	NONE
DAPCSY	PEAT CUTTING SYMBOL	NONE
DAPI	PILE CENTROID	NONE
DAPI10	PILE LEFT	NONE
DAPI20	PILE RIGHT	NONE
DAPK	PARK CENTROID	NONE
DAPK10	PARK LEFT	NONE
DAPK20	PARK RIGHT	NONE
DAPK30	PARK TEXT	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DAPKNA10	NATIONAL PARK LEFT	NONE
DAPKNA20	NATIONAL PARK RIGHT	NONE
DAPKNA30	NATIONAL PARK TEXT	NONE
DAPKPI	PARK PICNIC CENTROID	NONE
DAPKPI10	PARK PICNIC LEFT	NONE
DAPKPI20	PARK PICNIC RIGHT	NONE
DAPKPISY	PARK PICNIC SYMBOL	NONE
DAPKPR10	PARK PROVINCIAL LEFT	NONE
DAPKPR20	PARK PROVINCIAL RIGHT	NONE
DAPKPR30	PARK PROVINCIAL TEXT	NONE
DAPM	PULPMILL CENTROID	NONE
DAPM10	PULPMILL LEFT	NONE
DAPM20	PULPMILL RIGHT	NONE
DAPT	PIT CENTROID	NONE
DAPT10	PIT LEFT	NONE
DAPT20	PIT RIGHT	NONE
DAPTSY	PIT SYMBOL	NONE
DAQU	QUARRY CENTROID	NONE
DAQU04	QUARRY ABANDONED	NONE
DAQU10	QUARRY LEFT	NONE
DAQU14	QUARRY LEFT ABANDONED	NONE
DAQU20	QUARRY RIGHT	NONE
DAQU24	QUARRY RIGHT ABANDONED	NONE
DAQUSY	QUARRY SYMBOL	NONE
DARA	REST AREA CENTROID	NONE
DARA02	REST AREA UNPAVED	NONE
DARA11	REST AREA LEFT PAVED	NONE
DARA12	REST AREA LEFT UNPAVED	NONE
DARA21	REST AREA RIGHT PAVED	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DARA22	REST AREA RIGHT	NONE
DART	RACETRACK CENTROID	NONE
DART02	RACETRACK UNPAVED	NONE
DART11	RACETRACK LEFT PAVED	NONE
DART12	RACETRACK LEFT UNPAVED	NONE
DART21	RACETRACK RIGHT PAVED	NONE
DART22	RACETRACK RIGHT UNPAVED	NONE
DARTSY	RACETRACK SYMBOL	NONE
DASA	STORAGE AREA CENTROID	NONE
DASA01	STORAGE AREA PAVED	NONE
DASA02	STORAGE AREA UNPAVED	NONE
DASA11	STORAGE AREA LEFT PAVED	NONE
DASA12	STORAGE AREA LEFT UNPAVED	NONE
DASA21	STORAGE AREA RIGHT PAVED	NONE
DASA22	STORAGE AREA RIGHT UNPVD	NONE
DASASY	STORAGE AREA SYMBOL	NONE
DASF	SPORTS FIELD CENTROID	NONE
DASF10	SPORTS FIELD LEFT	NONE
DASF20	SPORTS FIELD RIGHT	NONE
DASFSY	SPORTS FIELD SYMBOL	NONE
DASK	SKI AREA CENTROID	NONE
DASK10	SKI AREA LEFT	NONE
DASK20	SKI AREA RIGHT	NONE
DASKSY	SKI AREA SYMBOL	NONE
DASR	SHOOTING RANGE CENTROID	NONE
DASR10	SHOOTING RANGE LEFT	NONE
DASR20	SHOOTING RANGE RIGHT	NONE
DASRSY	SHOOTING AREA SYMBOL	NONE
DASV	AUTO SALVAGE CENTROID	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DASV10	AUTO SALVAGE LEFT	NONE
DASV20	AUTO SALVAGE RIGHT	NONE
DASVSY	SALVAGE YARD SYMBOL	NONE
DASW	SEWAGE TREATMENT PLANT CENTROID	NONE
DASW10	SEWAGE TREATMENT PLANT LEFT	NONE
DASW20	SEWAGE TREATMENT PLANT RIGHT	NONE
DASWSY	SEWAGE TREATMENT SYMBOL	NONE
DAUC	CONSTRUCTION AREA CENTROID	NONE
DAUC10	CONSTRUCTION AREA LEFT	NONE
DAUC20	CONSTRUCTION AREA RIGHT	NONE
DAUCSY	CONSTRUCTION AREA SYMBOL	NONE
DAUN	DESIGNATED AREA MISCELLANEOUS CENTROID	NONE
DAUN10	DESIGNATED AREA LEFT/MISCELLANEOUS	NONE
DAUN20	DESIGNATED AREA RIGHT/MISCELLANEOUS	NONE
DAUN30	DESIGNATED AREA MISCELLANEOUS TEXT	NONE
DLBN30	BOUNDARY TEXT GENERAL	NONE
DLBNCO	BOUNDARY COUNTY	NONE
DLBNCO30	BOUNDARY COUNTY TEXT	NONE
DLBNIN	BOUNDARY INTERNATIONAL	NONE
DLBNIN30	INTERNATIONAL BOUNDARY TEXT	NONE
DLBNMU	BOUNDARY MUNICIPAL	NONE
DLBNMU30	BOUNDARY MUNICIPAL TEXT	NONE
DLBNPA	BOUNDARY PARISH	NONE
DLBNPA30	BOUNDARY PARISH TEXT	NONE
DLBNPR	BOUNDARY PROVINCIAL	NONE
DLBNPR30	BOUNDARY PROVINCIAL TEXT	NONE
DLCM	CONTROL MONUMENT	NONE
DLCM30	CONTROL MONUMENT NUMBER	NONE
DLGL	GRID LINE	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
DLGL30	GRID NUMBERS TEXT	NONE
DLID30	SHEET NUMBER	NONE
DLNL100	DATASET BOUNDARY THEME 100	NETWORK
DLNL210	DATASET BOUNDARY THEME 210	NONE
DLNL220	DATASET BOUNDARY THEME 220	NONE
DLNL230	DATASET BOUNDARY THEME 230	NONE
DLNL240	DATASET BOUNDARY THEME 240	NONE
DLNL250	DATASET BOUNDARY THEME 250	NONE
DLNL260	DATASET BOUNDARY THEME 260	NONE
DLNL30	GEOGRAPHICAL COORDINATE	NONE
DLNL300	DATASET BOUNDARY THEME 300	POLYGON
DLNL310	DATASET BOUNDARY THEME 310	NETWORK
DLNLIN	DELIMITER NEATLINE INNER	NONE
LCCL	CUT-LINE	NONE
LCNU	NURSERY CENTROID	NONE
LCNU10	NURSERY LEFT	NONE
LCNU20	NURSERY RIGHT	NONE
LCOR	ORCHARD CENTROID	NONE
LCOR10	ORCHARD LEFT	NONE
LCOR20	ORCHARD RIGHT	NONE
LCORSY	ORCHARD	NONE
LCRF	REFORESTATION CENTROID	NONE
LCRF10	REFORESTATION LEFT	NONE
LCRF20	REFORESTATION RIGHT	NONE
LCRFSY	REFORESTATION SYMBOL	NONE
LCTA	TREE AREA CENTROID	NONE
LCTA10	TREE AREA LEFT	NONE
LCTA20	TREE AREA RIGHT	NONE
LCTR	TREE ROW	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
LCTS	TREE INDIVIDUAL SYMBOL	NONE
LCTX	LAND COVER OTHER TEXT	NONE
LFCF10	CLIFF LEFT	NONE
LFCF20	CLIFF RIGHT	NONE
LFCK	CHECK POINT	NONE
LFEM	EMBANKMENT	NONE
LFSH	SPOT HEIGHT	NONE
LFTM	DTM SPOT ELEVATION	NONE
LFTMDG	DTM DIGITIZED GAP POINT	NONE
RRBR	BRIDGE	NONE
RRBR03	BRIDGE UNDER CONSTRUCTION	NONE
RRBR04	BRIDGE RUIN	NONE
RRBR30	BRIDGE TEXT	NONE
RRBRSY	DOT BRIDGE SYMBOL	NETWORK
RRCL	CULVERT DIGITIZED LINE	NONE
RRCT	CUTTING	NONE
RRCT10	CUTTING LEFT	NONE
RRCT20	CUTTING RIGHT	NONE
RRCU	CULVERTS	NONE
RRFB	FOOTBRIDGE	NONE
RRFC	FERRY CROSSING	NONE
RRFC04	FERRY CROSSING ABANDONED	NONE
RRFL	FILL DOUBLE	NONE
RRFL10	FILL LEFT	NONE
RRFL20	FILL RIGHT	NONE
RROP	OVERPASS (ROAD/RAILROAD)	NONE
RRRD30	ROAD TEXT	NONE
RRRDA	ARTERIAL ROAD	NETWORK
RRRDATSY	ARTERIAL ROAD SYMBOL	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
RRRDAW30	ROAD LOCAL SERVICE ALL WEATHER TEXT	NONE
RRRDC	COLLECTOR ROAD	NETWORK
RRRDCOSY	COLLECTOR ROAD SYMBOL	NONE
RRRDLG	LOCAL GRAVEL ROAD	NETWORK
RRRDLN	LOCAL NUMBERED ROAD	NETWORK
RRRDLO	LOCAL NAMED ROAD	NETWORK
RRRDLOS	LOCAL ROAD SYMBOL	NONE
RRRDLP	LOCAL PAVED ROAD	NETWORK
RRRDM	ROADS WITHIN MUNICIPALITIES	NETWORK
RRRDN	NATIONAL HIGHWAY	NETWORK
RRRDO	LOCAL NUMBERED ROAD NON-DOT	NETWORK
RRRDPR30	ROAD HARD SURFACE PRIMARY TEXT	NONE
RRRDRAMP	ROUTE INTERCHANGE RAMP	NETWORK
RRRDSC30	ROAD HARD SURFACE SECONDARY TEXT	NONE
RRRDSL30	ROAD LOOSE SURFACE SECONDARY TEXT	NONE
RRRDTK30	TRACK TEXT	NONE
RRRDUR30	URBAN STREET TEXT	NONE
RRRR	RAILROAD	NETWORK
RRRR03	RAILROAD UNDER CONSTRUCTION	NETWORK
RRRR04	RAILROAD ABANDONED	NETWORK
RRRR30	RAILROAD TEXT	NONE
RRRRTT	RAILROAD TURNABLE SYMBOL	NONE
RRTU	TUNNEL	NONE
RRTU04	TUNNEL ABANDONED	NONE
RRTU05	TUNNEL INDEFINITE/APPROXIMATE	NONE
RRTU30	TUNNEL TEXT	NONE
RRTX	ROAD/RAILROAD OTHER TEXT	NONE
RRUP	UNDERPASS(ROAD/RAILROAD)	NONE
SRCOTX	COUNTY TEXT	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
SRNA	SHEET NAME	NONE
STAC	CABLE	NONE
STBP	BOOM PIER SYMBOL	NONE
STCD	COMMUNICATIONS DOME	NONE
STCH	CHIMNEY	NONE
STCV	CONVEYOR	NONE
STDD	DRY DOCK	NONE
STDDSY	DRY DOCK SYMBOL	NONE
STFE	FENCE	NONE
STGS	GRANDSTAND	NONE
STGS03	GRANDSTAND UNDER CONSTRUCTION	NONE
STGS04	GRANDSTAND RUIN	NONE
STGSSY	GRANDSTAND SYMBOL	NONE
STGT	GATE	NONE
STIN	INCINERATOR	NONE
STKL	KILN	NONE
STLH	LIGHTHOUSE SYMBOL	NONE
STLK	LOCKS	NONE
STLK04	LOCKS RUIN	NONE
STPO	POOL (LARGE)	NONE
STPOSY	POOL (LARGE) SYMBOL	NONE
STRI	RINK OUTDOOR	NONE
STRP	RAMP	NONE
STRP03	RAMP UNDER CONSTRUCTION	NONE
STRP07	RAMP OVERHEAD	NONE
STRW	RETAINING WALL	NONE
STSL	SKI LIFT	NONE
STSLSY	SKI LIFT SYMBOL	NONE
STSO	SILO	NONE
STSP	SLIPWAY	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
STSP04	SLIPWAY ABANDONED	NONE
STWH	WHARF	NONE
STWH03	WHARF UNDER CONSTRUCTION	NONE
STWH04	WHARF ABANDONED	NONE
STWH30	WHARF TEXT	NONE
STWL	WALL	NONE
STWM	WINDMILL	NONE
STWS	WEIGH SCALE	NONE
STWS04	WEIGH SCALE RUIN	NONE
UTPI	PIPELINE	NONE
UTPI03	PIPELINE UNDERGROUND	NONE
UTPI04	PIPELINE UNDERGROUND	NONE
UTPI06	PIPELINE UNDERGROUND	NONE
UTPI07	PIPELINE OVERHEAD	NONE
UTPI30	PIPELINE TEXT	NONE
UTSP	SEWAGE SETTLING POND SYMBOL	NONE
UTSPOL	SEWAGE SETTLING POND	NONE
UTSS	SUBSTATION OUTLINE	NONE
UTSY	SUBSTATION SYMBOL	NONE
UTTK	TANK SYMBOL	NONE
UTTKOL	TANK OUTLINE	NONE
UTTO	TOWER OTHER SYMBOL	NONE
UTTO30	TOWER OTHER TEXT	NONE
UTTR	TRANSMISSION LINE SYMBOL	NONE
UTTX	OTHER TEXT	NONE
WABD	DAM (BEAVER)	NONE
WABW	BREAKWATER	NONE
WABW03	BREAKWATER UNDER CONSTRUCTION	NONE
WABW30	BREAKWATER TEXT	NONE

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
WACA	CENTROID CANAL	POLYGON
WACA04	CANAL RUIN/INACTIVE/ABANDONED	POLYGON
WACASY	CANAL SYMBOL	NONE
WACO	CENTROID COASTLINE	POLYGON
WACO10	COASTLINE WATER LEFT (NEW)	POLYGON
WACO20	COASTLINE WATER RIGHT (NEW)	POLYGON
WACOIS	COASTAL ISLAND	POLYGON
WACO_V	COASTLINE VIRTUAL LINE	POLYGON
WACT	COASTLINE TEXT	NONE
WAC_V	VIRTUAL LINE FOR COASTLINE	POLYGON
WADI	DITCH	POLYGON
WADI05	DITCH INDEFINITE	POLYGON
WADM	DAM (MANMADE)	NONE
WADM03	DAM UNDER CONSTRUCTION	NONE
WADM04	DAM RUIN/INACTIVE/ABANDONED	NONE
WADMSY	DAM SYMBOL	NONE
WADY10	DYKE LEFT	NONE
WADY20	DYKE RIGHT	NONE
WAF10	FALLS LEFT	NONE
WAF20	FALLS RIGHT	NONE
WAFASY	FALLS SYMBOL	NONE
WAFI	FISH LADDER	NONE
WAFI04	FISH LADDER RUIN	NONE
WAFU	FLUME	NONE
WALE	WATER LEVEL CARTOGRAPHIC	POLYGON
WALK	CENTROID LAKE	POLYGON
WALK10	LAKE LEFT (NEW)	POLYGON
WALK20	LAKE RIGHT (NEW)	POLYGON
WALKIS	LAKE ISLAND	POLYGON

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
WALK_V	LAKE VIRTUAL LINE	POLYGON
WALP	LOBSTER POUND	NONE
WALT	LAKE TEXT	NONE
WARA10	RAPIDS LEFT	NONE
WARA20	RAPIDS RIGHT	NONE
WARESY	RESERVOIR SYMBOL	NONE
WARK	ROCK (IN WATER)	NONE
WARS	CENTROID RESERVOIR UNDERGROUND	POLYGON
WARS06	RESERVOIR UNDERGROUND	POLYGON
WARS10	RESERVOIR LEFT (NEW)	POLYGON
WARS16	RESERVOIR UNDERGROUND LEFT	POLYGON
WARS20	RESERVOIR RIGHT (NEW)	POLYGON
WARS26	RESERVOIR UNDERGROUND RIGHT	POLYGON
WARS_V	RESERVOIR VIRTUAL LINE	POLYGON
WART	RESERVOIR TEXT	NONE
WARV30	STREAM TEXT	NONE
WARVDL	CENTROID STREAM DOUBLE LINE	POLYGON
WARVDL10	STREAM DOUBLE LINE LEFT (NEW)	POLYGON
WARVDL15	STREAM DOUBLE LINE LEFT INDEFINITE	POLYGON
WARVDL20	DOUBLE LINE STREAM RIGHT (NEW)	POLYGON
WARVDL25	DOUBLE LINE STREAM RIGHT INDEFINITE	POLYGON
WARVDL_V	STREAM DOUBLE LINE VIRTUAL	POLYGON
WARVIS	CENTROID STREAM ISLAND	POLYGON
WARVIS10	STREAM ISLAND LEFT	POLYGON
WARVIS15	STREAM ISLAND LEFT INDEFINITE	POLYGON
WARVIS20	STREAM ISLAND RIGHT	POLYGON
WARVIS25	STREAM ISLAND RIGHT INDEFINITE	POLYGON
WARVIS30	STREAM ISLAND TEXT	POLYGON
WARVIS_V	STREAM ISLAND VIRTUAL	POLYGON

FEATURE CODE	DESCRIPTION	TOPOLOGICAL STATUS
WARVLK	CENTROID RIVERLAKE	POLYGON
WARVLK10	RIVER LAKE LEFT (NEW)	POLYGON
WARVLK20	RIVER LAKE RIGHT (NEW)	POLYGON
WARVLKIS	RIVER LAKE ISLAND	POLYGON
WARVLK_V	RIVERLAKE VIRTUAL	POLYGON
WARVSL05	STREAM INDEFINITE	POLYGON
WARVSP	STREAM SPLIT	POLYGON
WARVSP05	STREAM SPLIT INDEFINITE	POLYGON
WASMSY	SWAMP SYMBOL	NONE
WASP_V	WATER BODY SPINES	NETWORK
WAST	SWAMP TEXT	NONE
WASW	CENTROID	POLYGON
WASW10	SWAMP LEFT (NEW)	POLYGON
WASW20	SWAMP RIGHT (NEW)	POLYGON
WASW30	SWAMP TEXT	POLYGON
WASW_V	SWAMP VIRTUAL LINE	POLYGON
WATX	WATER OTHER TEXT	NONE
WA_V	VIRTUAL LINE SHARED HYDROGRAPHY LINES	POLYGON

APPENDIX C ETB Map File Information

This Appendix provides a list of ETB Map Files sorted by file name. Information is also included on the old ETB Map name, ETB geocode, PDP versus VAX collection method, level of structuring on non structured Themes, and date of photography.

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
44456710	-	T15	VAX	CMB	-
44506700	-	S1G	VAX	CMB	-
44506710	-	S1F	VAX	CMB	-
44556670	723VRJ	S2K	PDP	E15	06/86
44556680	722XRO	S2J	PDP	E15	06/86
44556690	721ZQY	S2H	PDP	E15	06/86
44606660	729HLX	S2R	PDP	E15	06/86
44606670	729DR2	S2Q	PDP	E15	06/86
44606680	728FR0	S2P	PDP	E15	06/86
44606690	727HQB	S2N	PDP	E15	06/86
44656660	729ZL9	S2X	PDP	E15	06/86
44656670	729VLE	S2W	PDP	E15	06/86
44656680	728XLD	S2V	PDP	E15	06/86
44706670	72FDFQ	S24	PDP	E15	06/86
44706680	72EFFP	S23	PDP	E15	06/86
44756670	72FVF3	R2D	PDP	E15	06/86
44756680	72EXF8	R2C	PDP	E15	06/86
44806670	72LD9F	R2K	PDP	E15	06/86
44806690	72JH9J	R2H	PDP	E15	06/84
44856690	72JZ92	R2N	PDP	E15	06/84
44906670	72RD33	R2W	VAX	CMB	00/76
44906680	72QF39	R2V	PDP	E15	06/84
44906690	72PH3E	R2T	PDP	E15	06/84

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
44906700	72PD3K	R1Z	PDP	E15	06/84
44956660	72RTXG	R25	VAX	CMB	00/76
44956670	72RPXG	R24	VAX	CMB	00/76
44956680	72QRXL	R23	PDP	E15	06/84
44956690	72PTXR	R22	PDP	E15	06/84
44956700	72PPXX	R16	PDP	E15	06/84
45006670	72X7RY	Q2D	PDP	E15	06/84
45006680	72W9RY	Q2C	PDP	E15	06/84
45006690	72VBX4	Q2B	PDP	E15	06/84
45056640	72ZPR5	Q3H	PDP	E15	06/84
45056650	72YRR5	Q2M	PDP	E15	06/84
45056660	72XTR5	Q2L	PDP	E15	06/84
45056670	72XPRA	Q2K	PDP	E15	06/84
45056680	72WRRRA	Q2J	PDP	E15	06/84
45056690	72VTRG	Q2H	PDP	E15	06/84
45056700	72VPRM	Q1M	PDP	E15	07/85
45056710	72URRS	Q1L	PDP	E15	07/85
45106620	7909LH	Q3Q	PDP	E15	05/84
45106630	785BLH	Q3P	PDP	E15	05/84
45106640	7857LH	Q3N	PDP	E15	05/84
45106650	7849LH	Q2S	PDP	E15	05/84
45106660	783BLH	Q2R	PDP	E15	05/84
45106670	7837LN	Q2Q	PDP	E15	05/84
45106680	7829LN	Q2P	PDP	E15	05/84
45106690	781BLT	Q2N	PDP	E15	05/84
45106700	7817LZ	Q1S	PDP	E15	07/85
45106710	7809R5	Q1R	PDP	E15	07/85
45106720	775BRH	Q1Q	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45106730	7757RN	Q1P	PDP	E15	07/85
45156580	793PLA	Q4V	PDP	E15	06/84
45156590	792RL4	Q4T	PDP	E15	06/84
45156610	791PFY	Q3X	PDP	E15	06/84
45156620	790RFT	Q3W	PDP	E15	06/84
45156630	785TFT	Q3V	PDP	E15	06/84
45156640	785PFT	Q3T	PDP	E15	06/84
45156650	784RFT	Q2Z	PDP	E15	06/84
45156660	783TFT	Q2X	PDP	E15	06/84
45156670	783PFZ	Q2W	PDP	E15	06/84
45156680	782RL5	Q2V	PDP	E15	07/85
45156690	781TL5	Q2T	PDP	E15	07/85
45156700	781PLB	Q1Z	PDP	E15	07/85
45156710	780RMI	Q1X	PDP	E15	07/85
45156720	775TMO	Q1W	PDP	E15	07/85
45156730	775PS0	Q1V	PDP	E15	07/85
45156740	774RS6	Q1T	PDP	E15	07/85
45206580	7997FL	Q43	PDP	E15	06/84
45206590	7989FF	Q42	PDP	E15	06/84
45206600	797BFG	Q36	PDP	E15	06/84
45206610	7977FA	Q35	PDP	E15	06/84
45206620	7969FA	Q34	PDP	E15	06/84
45206630	78BBF4	Q33	PDP	E15	06/84
45206640	78B7F5	Q32	PDP	E15	06/84
45206650	78A9F5	Q26	PDP	E15	06/84
45206660	789BFB	Q25	PDP	E15	06/84
45206670	7897FB	Q24	PDP	E15	06/84
45206680	7889GC	Q23	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45206690	787BGC	Q22	PDP	E15	07/85
45206700	7877GI	Q16	PDP	E15	07/85
45206710	7869GU	Q15	PDP	E15	07/85
45206720	77BBM1	Q14	PDP	E15	07/85
45206730	77B7MD	Q13	PDP	E15	07/85
45206740	77A9MJ	Q12	PDP	E15	07/85
45256560	79ARFE	P4F	PDP	E15	07/84
45256570	799TF8	P4D	PDP	E15	07/84
45256580	799PF2	P4C	PDP	E15	07/84
45256590	798R9X	P4B	PDP	E15	07/84
45256600	797T9R	P3G	PDP	E15	07/84
45256610	797P9M	P3F	PDP	E15	07/84
45256620	796R9M	P3D	PDP	E15	07/84
45256630	78BT9G	P3C	PDP	E15	07/84
45256640	78BP9H	P3B	PDP	E15	07/84
45256650	78AR9H	P2G	PDP	E15	07/84
45256660	789T9N	P2F	PDP	E15	07/84
45256670	789PAI	P2D	PDP	E15	07/84
45256680	788RAO	P2C	PDP	E15	07/85
45256690	787TAU	P2B	PDP	E15	07/85
45256700	787PG1	P1G	PDP	E15	07/85
45256710	786RG7	P1F	PDP	E15	07/85
45256720	77BTGE	P1D	PDP	E15	07/85
45256730	77BPGQ	P1C	PDP	E15	07/85
45256740	77ARM2	P1B	PDP	E15	07/85
45306550	79H7F0	P4M	PDP	E15	08/84
45306560	79G99P	P4L	PDP	E15	08/84
45306570	79FB9J	P4K	PDP	E15	08/84

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45306580	79F79E	P4J	PDP	E15	08/84
45306590	79E998	P4H	PDP	E15	08/84
45306600	79DB93	P3M	PDP	E15	08/84
45306610	79D73X	P3L	PDP	E15	08/84
45306620	79C93Y	P3K	PDP	E15	06/84
45306630	78HB3Y	P3J	PDP	E15	06/84
45306640	78H73T	P3H	PDP	E15	06/84
45306650	78G93Z	P2M	PDP	E15	07/85
45306660	78FB4U	P2L	PDP	E15	07/85
45306670	78F74U	P2K	PDP	E15	07/85
45306680	78E9A1	P2J	PDP	E15	07/85
45306690	78DBA7	P2H	PDP	E15	07/85
45306700	78D7AD	P1M	PDP	E15	07/85
45306710	78C9AK	P1L	PDP	E15	07/85
45306720	77HBAQ	P1K	PDP	E15	07/85
45306730	77H7G3	P1J	PDP	E15	07/85
45306740	77G9GF	P1H	PDP	E15	07/85
45356540	79HT8S	P5N	PDP	E15	07/84
45356550	79HP8H	P4S	PDP	E15	07/84
45356560	79GR90	P4R	PDP	E15	07/84
45356570	79FT3U	P4Q	PDP	E15	07/84
45356580	79FP3P	P4P	PDP	E15	06/84
45356590	79ER3J	P4N	PDP	E15	06/84
45356600	79DT3E	P3S	PDP	E15	06/84
45356610	79DP39	P3R	PDP	E15	06/84
45356620	79CR39	P3Q	PDP	E15	06/84
45356630	78HT3A	P3P	PDP	E15	06/84
45356640	78HP3A	P3N	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45356650	78GR3B	P2S	PDP	E15	07/85
45356660	78FT46	P2R	PDP	E15	07/85
45356670	78FP46	P2Q	PDP	E15	07/85
45356680	78ER4D	P2P	PDP	E15	07/85
45356690	78DT4K	P2N	PDP	E15	07/85
45356700	78DP4Q	P1S	PDP	E15	07/85
45356710	78CR4X	P1R	PDP	E15	07/85
45356720	77HTA3	P1Q	PDP	E15	07/85
45356730	77HPAG	P1P	PDP	E15	07/85
45356740	77GRAT	P1N	PDP	E15	07/85
45406530	7AI98E	P5V	PDP	E15	06/84
45406540	79NB83	P5T	PDP	E15	06/84
45406550	79N72S	P4Z	PDP	E15	06/84
45406560	79M92M	P4X	PDP	E15	06/84
45406570	79LB2B	P4W	PDP	E15	06/84
45406580	79L730	P4V	PDP	E15	06/84
45406590	79K3XV	P4T	PDP	E15	06/84
45406600	79J5XP	P3Z	PDP	E15	06/84
45406610	79J1XK	P3X	PDP	E15	06/84
45406620	79I3XL	P3W	PDP	E15	06/84
45406630	78N5XM	P3V	PDP	E15	07/85
45406640	78N1XM	P3T	PDP	E15	07/85
45406650	78M3XN	P2Z	PDP	E15	07/85
45406660	78L5YI	P2X	PDP	E15	07/85
45406670	78L1YJ	P2W	PDP	E15	07/85
45406680	78K3YP	P2V	PDP	E15	07/85
45406690	78J5YW	P2T	PDP	E15	07/85
45406700	78J743	P1Z	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45406710	78I94A	P1X	PDP	E15	07/85
45406720	77NB4M	P1W	PDP	E15	07/85
45406730	77N74T	P1V	PDP	E15	07/85
45406740	77M9B0	P1T	PDP	E15	07/85
45456510	7AJT7H	P55	PDP	E15	06/84
45456520	7AJP80	P54	PDP	E15	06/84
45456530	7AIR2P	P53	PDP	E15	06/84
45456540	79NT2E	P52	PDP	E15	06/84
45456550	79NP22	P46	PDP	E15	06/84
45456560	79MLWX	P45	PDP	E15	06/84
45456570	79LNWM	P44	PDP	E15	06/84
45456580	79LJWH	P43	PDP	E15	06/84
45456590	79KLX6	P42	PDP	E15	06/84
45456600	79JNX1	P36	PDP	E15	06/84
45456610	79JJX2	P35	PDP	E15	06/84
45456620	79ILRX	P34	PDP	E15	06/84
45456630	78NNRX	P33	PDP	E15	06/84
45456640	78NJRY	P32	PDP	E15	07/85
45456650	78MLRZ	P26	PDP	E15	07/85
45456660	78LNSU	P25	PDP	E15	07/85
45456670	78LJY1	P24	PDP	E15	07/85
45456680	78KLY2	P23	PDP	E15	07/85
45456690	78JNY9	P22	PDP	E15	07/85
45456700	78JJYG	P16	PDP	E15	07/85
45456710	78ILYM	P15	PDP	E15	07/85
45456720	77NNYZ	P14	PDP	E15	07/85
45456730	77NP50	P13	PDP	E15	07/85
45456740	77MR5D	P12	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45456750	77LT5Q	PZ6	PDP	E15	07/85
45506500	7AQ978	N5G	PDP	E15	06/84
45506510	7APB1R	N5F	PDP	E15	06/84
45506520	7AP71G	N5D	PDP	E15	06/84
45506530	7AO915	N5C	PDP	E15	06/84
45506540	79T5WO	N5B	PDP	E15	06/84
45506550	79T1WD	N4G	PDP	E15	06/84
45506560	79S3W8	N4F	PDP	E15	06/84
45506570	79R5QX	N4D	PDP	E15	06/84
45506580	79R1QS	N4C	PDP	E15	06/84
45506590	79Q3QN	N4B	PDP	E15	06/84
45506600	79P5RC	N3G	PDP	E15	06/84
45506610	79P1RD	N3F	PDP	E15	06/84
45506620	79O3R8	N3D	PDP	E15	06/84
45506630	78T5R9	N3C	PDP	E15	06/84
45506640	78T1RA	N3B	PDP	E15	06/84
45506650	78S3RB	N2G	PDP	E15	06/84
45506660	78R5S6	N2F	PDP	E15	07/85
45506670	78R1SD	N2D	PDP	E15	07/85
45506680	78Q3SE	N2C	PDP	E15	07/85
45506690	78P5SL	N2B	PDP	E15	07/85
45506700	78P1SS	N1G	PDP	E15	07/85
45506710	78O3SZ	N1F	PDP	E15	07/85
45506720	77T5Z6	N1D	PDP	E15	07/85
45506730	77T1ZD	N1C	PDP	E15	07/85
45506740	77S3ZQ	N1B	PDP	E15	07/85
45556470	7ASRC3	N6K	PDP	E15	08/82
45556490	7ARP65	N6H	PDP	E15	08/82

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45556500	7AQR1I	N5M	PDP	E15	08/82
45556510	7APT18	N5L	PDP	E15	08/82
45556520	7APJVR	N5K	PDP	E15	08/82
45556530	7AOLVG	N5J	PDP	E15	08/82
45556540	79TNV5	N5H	PDP	E15	08/82
45556550	79TJQO	N4M	PDP	E15	07/84
45556560	79SLQJ	N4L	PDP	E15	07/84
45556570	79RNQE	N4K	PDP	E15	07/84
45556580	79RJQ3	N4J	PDP	E15	07/84
45556590	79QLKZ	N4H	PDP	E15	07/84
45556600	79PNLU	N3M	PDP	E15	07/84
45556610	79PJLP	N3L	PDP	E15	07/84
45556620	79OLLK	N3K	PDP	E15	07/84
45556630	78TNLL	N3J	PDP	E15	07/84
45556640	78TJLM	N3H	PDP	E15	07/84
45556650	78SLLN	N2M	PDP	E15	07/84
45556660	78RNMI	N2L	PDP	E15	07/85
45556670	78RJMQ	N2K	PDP	E15	07/85
45556680	78QLMX	N2J	PDP	E15	07/85
45556690	78PNMY	N2H	PDP	E15	07/85
45556700	78PJS5	N1M	PDP	E15	07/85
45556710	78OLTC	N1L	PDP	E15	07/85
45556720	77TNTJ	N1K	PDP	E15	07/85
45556730	77TJTQ	N1J	PDP	E15	07/85
45556740	77SLZ4	N1H	PDP	E15	07/85
45556750	77RNZH	NZM	PDP	E15	07/85
45606470	7AY96D	N6Q	PDP	E15	08/82
45606480	7AXB0W	N6P	PDP	E15	08/82

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45606490	7AX70F	N6N	PDP	E15	08/82
45606500	7AW3UZ	N5S	PDP	E15	08/82
45606510	7AV5VI	N5R	PDP	E15	08/82
45606520	7AV1V1	N5Q	PDP	E15	08/82
45606530	7AU3PQ	N5P	PDP	E15	08/82
45606540	79Z5PG	N5N	PDP	E15	08/82
45606550	79Z1PB	N4S	PDP	E15	07/84
45606560	79Y3KU	N4R	PDP	E15	07/84
45606570	79X5KP	N4Q	PDP	E15	07/84
45606580	79X1KF	N4P	PDP	E15	07/84
45606590	79W3KA	N4N	PDP	E15	07/84
45606600	79V5KB	N3S	PDP	E15	07/84
45606610	79V1L0	N3R	PDP	E15	07/84
45606620	79U3L2	N3Q	PDP	E15	07/84
45606630	78Z5FX	N3P	PDP	E15	07/84
45606640	78Z1FY	N3N	PDP	E15	07/84
45606650	78Y3FZ	N2S	PDP	E15	07/84
45606660	78X5M1	N2R	PDP	E15	07/85
45606670	78X1M2	N2Q	PDP	E15	07/85
45606680	78W3M9	N2P	PDP	E15	07/85
45606690	78V5MA	N2N	PDP	E15	07/85
45606700	78V1NC	N1S	PDP	E15	07/85
45606710	78U3NP	N1R	PDP	E15	07/85
45606720	77Z5NW	N1Q	PDP	E15	07/85
45606730	77Z1T9	N1P	PDP	E15	07/85
45606740	77Y3TH	N1N	PDP	E15	07/85
45606750	77Y0OO	NZS	PDP	E15	07/85
45606760	77X2U1	NZR	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45656460	7AZOB9	N6X	PDP	E15	08/82
45656470	7AYQ5S	N6W	PDP	E15	08/82
45656480	7AXT06	N6V	PDP	E15	08/82
45656490	7AXJUP	N6T	PDP	E15	08/82
45656500	7AWLU9	N5Z	PDP	E15	08/82
45656510	7AVNOY	N5X	PDP	E15	08/82
45656520	7AVJON	N5W	PDP	E15	08/82
45656530	7AULP1	N5V	PDP	E15	08/82
45656540	79ZNJQ	N5T	PDP	E15	08/82
45656550	79ZJIM	N4Z	PDP	E15	07/84
45656560	79YLJB	N4X	PDP	E15	07/84
45656570	79XNK0	N4W	PDP	E15	07/84
45656580	79XJEW	N4V	PDP	E15	07/84
45656590	79WLER	N4T	PDP	E15	07/84
45656600	79VNEN	N3Z	PDP	E15	07/84
45656610	79VJFC	N3X	PDP	E15	07/84
45656620	79ULFD	N3W	PDP	E15	07/84
45656630	78ZNF9	N3V	PDP	E15	07/84
45656640	78ZJFA	N3T	PDP	E15	07/84
45656650	78YLF8	N2Z	PDP	E15	07/84
45656660	78XNGD	N2X	PDP	E15	07/84
45656670	78XJGE	N2W	PDP	E15	07/85
45656680	78WLGM	N2V	PDP	E15	07/85
45656690	78VNGT	N2T	PDP	E15	07/85
45656700	78VJHU	N1Z	PDP	E15	07/85
45656710	78ULN2	N1X	PDP	E15	07/85
45656720	77ZNN9	N1W	PDP	E15	07/85
45656730	77ZJNN	N1V	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45656740	77YMIO	N1T	PDP	E15	07/85
45656750	77YIO1	NZZ	PDP	E15	07/85
45656760	77XKOL	NZX	PDP	E15	07/85
45656770	77WMOY	NZW	PDP	E15	07/85
45656780	77WIV6	NZV	PDP	E15	07/85
45706440	7H08AS	N72	PDP	ETX	08/82
45706450	7G5AAB	N66	PDP	E15	08/82
45706460	7G565J	N65	PDP	E15	08/82
45706470	7G4852	N64	PDP	E15	08/82
45706480	7G34ZM	N63	PDP	E15	08/82
45706490	7G30Z5	N62	PDP	E15	08/82
45706500	7G23OJ	N56	PDP	E15	08/82
45706510	7G15O8	N55	PDP	E15	08/82
45706520	7G11IY	N54	PDP	E15	08/82
45706530	7G03IN	N53	PDP	E15	08/82
45706540	7F55J7	N52	PDP	E15	08/82
45706550	7F51DW	N46	PDP	E15	06/84
45706560	7F43DM	N45	PDP	E15	06/84
45706570	7F35DH	N44	PDP	E15	06/84
45706580	7F31E7	N43	PDP	E15	06/84
45706590	7F23E2	N42	PDP	E15	06/84
45706600	7F158Y	N36	PDP	E15	06/84
45706610	7F119O	N35	PDP	E15	06/84
45706620	7F039P	N34	PDP	E15	06/84
45706630	7E559R	N33	PDP	E15	06/84
45706640	7E519M	N32	PDP	E15	06/84
45706650	7E43AO	N26	PDP	E15	06/84
45706660	7E35AP	N25	PDP	E15	06/84

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45706670	7E31AR	N24	PDP	E15	07/85
45706680	7E23AY	N23	PDP	E15	07/85
45706690	7E15H0	N22	PDP	E15	07/85
45706700	7E11H7	N16	PDP	E15	07/85
45706710	7E03HF	N15	PDP	E15	07/85
45706720	7D55HM	N14	PDP	E15	07/85
45706730	7D52CU	N13	PDP	E15	07/85
45706740	7D44I7	N12	PDP	E15	07/85
45706750	7D40IL	NZ6	PDP	E15	07/85
45706760	7D32IY	NZ5	PDP	E15	07/85
45706770	7D24P6	NZ4	PDP	E15	07/85
45706780	7D20PJ	NZ3	PDP	E15	07/85
45756440	7H0QA1	M7B	PDP	ETX	07/82
45756450	7G5S4L	M6G	PDP	E15	07/82
45756460	7G5IYY	M6F	PDP	E15	07/82
45756470	7G4KZC	M6D	PDP	E15	07/82
45756480	7G3MTW	M6C	PDP	E15	07/82
45756490	7G3ITF	M6B	PDP	E15	07/82
45756500	7G2KT5	M5G	PDP	E15	07/82
45756510	7G1NIJ	M5F	PDP	E15	07/82
45756520	7G1JI8	M5D	PDP	E15	07/82
45756530	7G0LCY	M5C	PDP	E15	07/82
45756540	7F5NDI	M5B	PDP	E15	07/82
45756550	7F5JD7	M4G	PDP	E15	06/84
45756560	7F4L7X	M4F	PDP	E15	06/84
45756570	7F3N7S	M4D	PDP	E15	06/84
45756580	7F3J8I	M4C	PDP	E15	06/84
45756590	7F2L8E	M4B	PDP	E15	06/84

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45756600	7F1N89	M3G	PDP	E15	06/84
45756610	7F1J85	M3F	PDP	E15	06/84
45756620	7F0L91	M3D	PDP	E15	06/84
45756630	7E5N92	M3C	PDP	E15	06/84
45756640	7E5J94	M3B	PDP	E15	06/84
45756650	7E4LA0	M2G	PDP	E15	06/84
45756660	7E3NA1	M2F	PDP	E15	06/84
45756670	7E3JA3	M2D	PDP	E15	07/85
45756680	7E2LAB	M2C	PDP	E15	07/85
45756690	7E1NBC	M2B	PDP	E15	07/85
45756700	7E1JBK	M1G	PDP	E15	07/85
45756710	7E0LBR	M1F	PDP	E15	07/85
45756720	7D5NBZ	M1D	PDP	E15	07/85
45756730	7D5KC7	M1C	PDP	E15	07/85
45756740	7D4MCK	M1B	PDP	E15	07/85
45756750	7D4ICY	MZG	PDP	E15	07/85
45756760	7D3KJ6	MZF	PDP	E15	07/85
45756770	7D2MJJ	MZD	PDP	E15	07/85
45756780	7D2IP3	MZC	PDP	E15	07/85
45806420	7H7A9P	M7K	PDP	ETX	07/82
45806430	7H7693	M7J	PDP	ETX	07/82
45806440	7H683G	M7H	PDP	ETX	07/82
45806450	7GB4YU	M6M	PDP	E15	07/82
45806460	7GB0Y8	M6L	PDP	E15	07/82
45806470	7GA2SS	M6K	PDP	E15	07/82
45806480	7G94T6	M6J	PDP	E15	07/82
45806490	7G90NP	M6H	PDP	E15	07/82
45806500	7G82NF	M5M	PDP	E15	07/82

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45806510	7G74HZ	M5L	PDP	E15	07/82
45806520	7G71CJ	M5K	PDP	E15	07/82
45806530	7G63C8	M5J	PDP	E15	06/84
45806540	7FB56Y	M5H	PDP	E15	06/84
45806550	7FB17I	M4M	PDP	E15	06/84
45806560	7FA37E	M4L	PDP	E15	06/84
45806570	7F9574	M4K	PDP	E15	06/84
45806580	7F911Z	M4J	PDP	E15	06/84
45806590	7F832P	M4H	PDP	E15	06/84
45806600	7F752L	M3M	PDP	E15	06/84
45806610	7F712H	M3L	PDP	E15	06/84
45806620	7F633C	M3K	PDP	E15	06/84
45806630	7EB53E	M3J	PDP	E15	06/84
45806640	7EB13G	M3H	PDP	E15	06/84
45806650	7EA34C	M2M	PDP	E15	06/84
45806660	7E954D	M2L	PDP	E15	06/84
45806670	7E914F	M2K	PDP	E15	07/85
45806680	7E834N	M2J	PDP	E15	07/85
45806690	7E755P	M2H	PDP	E15	07/85
45806700	7E715X	M1M	PDP	E15	07/85
45806710	7E63B4	M1L	PDP	E15	07/85
45806720	7E606C	M1K	PDP	E15	07/85
45806730	7DB26K	M1J	PDP	E15	07/85
45806740	7DA46Y	M1H	PDP	E15	07/85
45806750	7DA0CB	MZM	PDP	E15	07/85
45806760	7D92DJ	MZL	PDP	E15	07/85
45806770	7D84DX	MZK	PDP	E15	07/85
45806780	7D80JH	MZJ	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45856420	7H7S84	M7Q	PDP	ETX	07/82
45856430	7H7O3C	M7P	PDP	ETX	07/82
45856440	7H6KXQ	M7N	PDP	ETX	07/82
45856450	7GBMXA	M6S	PDP	E15	07/82
45856460	7GBISI	M6R	PDP	E15	07/82
45856470	7GAKS2	M6Q	PDP	E15	07/82
45856480	7G9MML	M6P	PDP	E15	07/82
45856490	7G9IM5	M6N	PDP	E15	07/82
45856500	7G8KHP	M5S	PDP	E15	07/82
45856510	7G7MH9	M5R	PDP	E15	07/82
45856520	7G7IBZ	M5Q	PDP	E15	07/82
45856530	7G6L6J	M5P	PDP	E15	06/84
45856540	7FBN69	M5N	PDP	E15	06/84
45856550	7FBJ0Z	M4S	PDP	E15	06/84
45856560	7FAL1P	M4R	PDP	E15	06/84
45856570	7F9N1F	M4Q	PDP	E15	06/84
45856580	7F9J1A	M4P	PDP	E15	06/84
45856590	7F8L20	M4N	PDP	E15	06/84
45856600	7F7HWW	M3S	PDP	E15	06/84
45856610	7F7DWY	M3R	PDP	E15	06/84
45856620	7F6FXO	M3Q	PDP	E15	06/84
45856630	7EBHXQ	M3P	PDP	E15	06/84
45856640	7EBDXS	M3N	PDP	E15	06/84
45856650	7EAFYO	M2S	PDP	E15	06/84
45856660	7E9HYQ	M2R	PDP	E15	06/84
45856670	7E9DYY	M2Q	PDP	E15	07/85
45856680	7E8FYZ	M2P	PDP	E15	07/85
45856690	7E7N51	M2N	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45856700	7E7J59	M1S	PDP	E15	07/85
45856710	7E6L5H	M1R	PDP	E15	07/85
45856720	7E6I0P	M1Q	PDP	E15	07/85
45856730	7DBK0X	M1P	PDP	E15	07/85
45856740	7DAM6B	M1N	PDP	E15	07/85
45856750	7DAI7J	MZS	PDP	E15	07/85
45856760	7D9K7X	MZR	PDP	E15	07/85
45856770	7D8MDB	MZQ	PDP	E15	07/85
45856780	7D8IEO	MZP	PDP	E15	07/85
45906410	7HE875	M7X	PDP	ETX	07/84
45906420	7HDA2D	M7W	PDP	ETX	07/84
45906430	7HD0WR	M7V	PDP	ETX	07/84
45906440	7HC2WB	M7T	PDP	ETX	07/84
45906450	7GH4RJ	M6Z	PDP	E15	07/84
45906460	7GH0R3	M6X	PDP	E15	07/84
45906470	7GG2LH	M6W	PDP	E15	07/84
45906480	7GF4GV	M6V	PDP	E15	07/84
45906490	7GF0GL	M6T	PDP	E15	07/84
45906500	7GE2G5	M5Z	PDP	E15	07/84
45906510	7GD4BJ	M5X	PDP	E15	07/84
45906520	7GD0B9	M5W	PDP	E15	07/84
45906530	7GC25Z	M5V	PDP	E15	08/84
45906540	7FH50K	M5T	PDP	E15	08/84
45906550	7FH10A	M4Z	PDP	E15	08/84
45906560	7FG310	M4X	PDP	E15	08/84
45906570	7F9ZVQ	M4W	PDP	E15	08/84
45906580	7F9VVM	M4V	PDP	E15	08/84
45906590	7F8XWC	M4T	PDP	E15	08/84

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45906600	7F7ZW8	M3Z	PDP	E15	08/84
45906610	7F7VWA	M3X	PDP	E15	08/84
45906620	7F6XX0	M3W	PDP	E15	08/84
45906630	7EBZX2	M3V	PDP	E15	08/84
45906640	7EBVX4	M3T	PDP	E15	08/84
45906650	7EAXY0	M2Z	PDP	E15	08/84
45906660	7E9ZY2	M2X	PDP	E15	08/84
45906670	7E9VYA	M2W	PDP	E15	07/85
45906680	7E8XZ6	M2V	PDP	E15	07/85
45906690	7E7ZZE	M2T	PDP	E15	07/85
45906700	7E7VZM	M1Z	PDP	E15	07/85
45906710	7E6YUO	M1X	PDP	E15	07/85
45906720	7EC002	M1W	PDP	E15	07/85
45906730	7DH20A	M1V	PDP	E15	07/85
45906740	7DG41I	M1T	PDP	E15	07/85
45906750	7DG01W	MZZ	PDP	E15	07/85
45906760	7DF27A	MZX	PDP	E15	07/85
45906770	7DE48I	MZW	PDP	E15	07/85
45956400	7HFO76	M76	PDP	ETX	06/84
45956410	7HEQ1E	M75	PDP	ETX	06/84
45956420	7HDMVS	M74	PDP	ETX	06/84
45956430	7HDIW0	M73	PDP	ETX	06/84
45956440	7HCKQL	M72	PDP	ETX	06/84
45956450	7GHMKZ	M66	PDP	E15	06/84
45956460	7GHILD	M65	PDP	E15	06/84
45956470	7GGKFR	M64	PDP	E15	06/84
45956480	7GFMFB	M63	PDP	E15	06/84
45956490	7GFIIV	M62	PDP	E15	06/84

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
45956500	7GEKAG	M56	PDP	E15	06/84
45956510	7GDMB0	M55	PDP	E15	06/84
45956520	7GDI5K	M54	PDP	E15	06/84
45956530	7GCK5A	M53	PDP	E15	06/84
45956540	7FHHUU	M52	PDP	E15	06/84
45956550	7FHDUK	M46	PDP	E15	06/84
45956560	7FGFUG	M45	PDP	E15	06/84
45956570	7FFHV7	M44	PDP	E15	06/84
45956580	7FFDPX	M43	PDP	E15	06/84
45956590	7FEFPT	M42	PDP	E15	06/84
45956600	7FDHQP	M36	PDP	E15	06/84
45956610	7FDDQL	M35	PDP	E15	06/84
45956620	7FCFQH	M34	PDP	E15	06/84
45956630	7EHHRE	M33	PDP	E15	06/84
45956640	7EHDRG	M32	PDP	E15	06/84
45956650	7EGFSC	M26	PDP	E15	06/84
45956660	7EFHSE	M25	PDP	E15	06/84
45956670	7EFDSM	M24	PDP	E15	07/85
45956680	7EEFTO	M23	PDP	E15	07/85
45956690	7EDHTQ	M22	PDP	E15	07/85
45956700	7EDDTZ	M16	PDP	E15	07/85
45956710	7ECGU7	M15	PDP	E15	07/85
45956720	7ECCUF	M14	PDP	E15	07/85
45956730	7DHEUN	M13	PDP	E15	07/85
45956740	7DGGVV	M12	PDP	E15	07/85
45956750	7DGI19	MZ6	PDP	E15	07/85
45956760	7DFK2I	MZ5	PDP	E15	07/85
45956770	7DEM82	MZ4	PDP	E15	07/85

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46006400	7HL60L	L7G	PDP	ETX	07/82
46006410	7HK2UZ	L7F	PDP	ETX	07/82
46006420	7HJ4V1	L7D	PDP	ETX	07/82
46006430	7HJ0PM	L7C	PDP	ETX	07/82
46006440	7HI2KU	L7B	PDP	ETX	07/82
46006450	7GN4K8	L6G	PDP	E15	07/82
46006460	7GN0ES	L6F	PDP	E15	07/82
46006470	7GM2F7	L6D	PDP	E15	07/82
46006480	7GL49R	L6C	PDP	E15	06/84
46006490	7GL09B	L6B	PDP	E15	06/84
46006500	7GK24Q	L5G	PDP	E15	06/84
46006510	7GJ44G	L5F	PDP	E15	06/84
46006520	7GDUZU	L5D	PDP	E15	06/84
46006530	7GCWZL	L5C	PDP	E15	06/84
46006540	7FHYZB	L5B	PDP	E15	06/84
46006550	7FHVU1	L4G	PDP	E15	06/84
46006560	7FGXOR	L4F	PDP	E15	06/84
46006570	7FFZPI	L4D	PDP	E15	06/84
46006580	7FFVP8	L4C	PDP	E15	06/84
46006590	7FEXP4	L4B	PDP	E15	06/84
46006600	7FDZQ1	L3G	PDP	E15	06/84
46006610	7FDVKX	L3F	PDP	E15	06/84
46006620	7FCXKZ	L3D	PDP	E15	06/84
46006630	7EHZLP	L3C	PDP	E15	06/84
46006640	7EHVLS	L3B	PDP	E15	06/84
46006650	7EGXMO	L2G	PDP	E15	06/84
46006660	7EFZMW	L2F	PDP	E15	06/84
46006670	7EFVMY	L2D	VAX	ETX	11/88

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46006680	7EEXT1	L2C	VAX	ETX	11/88
46006690	7EDZT3	L2B	VAX	ETX	11/88
46006700	7EDVTB	L1G	VAX	ETX	11/88
46006710	7ECYOK	L1F	VAX	ETX	11/88
46006720	7ECUOS	L1D	PDP	E15	07/87
46006730	7DHWV0	L1C	PDP	E15	06/87
46006740	7DGYV8	L1B	PDP	E15	06/87
46006750	7DGUVN	LZG	PDP	E15	05/87
46006760	7DFWWV	LZF	PDP	E15	05/87
46006770	7DK42F	LZD	PDP	E15	05/87
46056370	7HMTGA	L8K	PDP	ETX	06/84
46056380	7HMPBD	L8J	PDP	ETX	06/84
46056390	7HLR5L	L8H	PDP	ETX	06/84
46056400	7HLIUU	L7M	PDP	ETX	06/84
46056410	7HKKU8	L7L	PDP	ETX	06/84
46056420	7HJMOM	L7K	PDP	ETX	06/84
46056430	7HJIJY	L7J	PDP	ETX	06/84
46056440	7HIKJ9	L7H	PDP	ETX	06/84
46056450	7GNMEI	L6M	PDP	E15	06/84
46056460	7GNIE2	L6L	PDP	E15	06/84
46056470	7GMK8N	L6K	PDP	E15	06/84
46056480	7GLM91	L6J	PDP	E15	06/84
46056490	7GLI3L	L6H	PDP	E15	06/84
46056500	7GKK40	L5M	PDP	E15	06/84
46056510	7GJGYQ	L5L	PDP	E15	06/84
46056520	7GJCYB	L5K	PDP	E15	06/84
46056530	7GIETV	L5J	PDP	E15	06/84
46056540	7FNGTL	L5H	PDP	E15	06/84

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46056550	7FNDOC	L4M	PDP	E15	06/84
46056560	7FMFO2	L4L	PDP	E15	06/84
46056570	7FLHIZ	L4K	PDP	E15	06/84
46056580	7FLDJP	L4J	PDP	E15	06/84
46056590	7FKFJM	L4H	PDP	E15	06/84
46056600	7FJHKC	L3M	PDP	E15	06/84
46056610	7FJDK8	L3L	PDP	E15	06/84
46056620	7FIFKB	L3K	PDP	E15	06/84
46056630	7ENHL1	L3J	PDP	E15	06/84
46056640	7ENDL4	L3H	PDP	E15	06/84
46056650	7EMFM0	L2M	PDP	E15	06/84
46056660	7ELHM8	L2L	PDP	E15	06/84
46056670	7ELDMB	L2K	VAX	ETX	11/88
46056680	7EKFND	L2J	VAX	ETX	11/88
46056690	7EJHNM	L2H	VAX	ETX	11/88
46056700	7EJEIO	L1M	VAX	ETX	11/88
46056710	7EIGIW	L1L	VAX	ETX	11/88
46056720	7EICO5	L1K	PDP	E15	07/87
46056730	7DNEPD	L1J	PDP	E15	06/87
46056740	7DMGPM	L1H	PDP	E15	06/87
46056750	7DMCQU	LZM	PDP	E15	05/87
46056760	7DLEW9	LZL	PDP	E15	05/87
46056770	7DKGWT	LZK	PDP	E15	05/87
46106370	7HSBAJ	L8Q	PDP	ETX	09/83
46106380	7HS74R	L8P	PDP	ETX	09/83
46106390	7HR950	L8N	PDP	ETX	09/83
46106400	7HQ5Z8	L7S	PDP	ETX	09/83
46106410	7HQ1TN	L7R	PDP	ETX	09/83

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46106420	7HP4IW	L7Q	PDP	ETX	09/83
46106430	7HP0IA	L7P	PDP	ETX	09/83
46106440	7HO2DJ	L7N	PDP	ETX	09/83
46106450	7GT47X	L6S	PDP	E15	09/83
46106460	7GT08C	L6R	PDP	E15	05/82
46106470	7GS22W	L6Q	PDP	E15	05/82
46106480	7GR42H	L6P	PDP	E15	05/82
46106490	7GLUXV	L6N	PDP	E15	05/82
46106500	7GKWXG	L5S	PDP	E15	05/82
46106510	7GJYY1	L5R	PDP	E15	05/86
46106520	7GJUSR	L5Q	PDP	E15	05/86
46106530	7GIWT6	L5P	PDP	E15	05/86
46106540	7FNYT2	L5N	PDP	E15	05/86
46106550	7FNUNT	L4S	PDP	E15	05/86
46106560	7FMXID	L4R	PDP	E15	05/86
46106570	7FLZIA	L4Q	PDP	E15	05/86
46106580	7FLVJ0	L4P	PDP	E15	05/86
46106590	7FKXDX	L4N	PDP	E15	05/86
46106600	7FJZDT	L3S	PDP	E15	05/86
46106610	7FJVEK	L3R	PDP	E15	05/86
46106620	7FIXEM	L3Q	PDP	E15	05/86
46106630	7ENZFJ	L3P	PDP	E15	05/86
46106640	7ENVFG	L3N	PDP	E15	05/86
46106650	7EMXGI	L2S	PDP	E15	05/86
46106660	7ELZGL	L2R	VAX	ETX	06/88
46106670	7ELVGN	L2Q	VAX	ETX	06/88
46106680	7EKXHQ	L2P	VAX	ETX	06/88
46106690	7EJZHY	L2N	VAX	ETX	06/88

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46106700	7EJWI1	L1S	VAX	ETX	06/88
46106710	7EIYI9	L1R	VAX	ETX	11/88
46106720	7EIUJC	L1Q	PDP	E15	07/87
46106730	7DNWJQ	L1P	PDP	E15	06/87
46106740	7DMYP5	L1N	PDP	E15	06/87
46106750	7DMUQ7	LZS	PDP	E15	05/87
46106760	7DLWQS	LZR	PDP	E15	05/87
46106770	7DKYX1	LZQ	PDP	E15	05/87
46156380	7HSP40	L8V	PDP	ETX	05/82
46156390	7HRLYF	L8T	PDP	ETX	05/82
46156400	7HQNSN	L7Z	PDP	ETX	05/82
46156410	7HQJNW	L7X	PDP	ETX	05/82
46156420	7HPLNB	L7W	PDP	ETX	05/82
46156430	7HPICJ	L7V	PDP	ETX	05/82
46156440	7HOK6Y	L7T	PDP	ETX	05/82
46156450	7GTM7D	L6Z	PDP	E15	05/82
46156460	7GTI1R	L6X	PDP	E15	05/82
46156470	7GSK26	L6W	PDP	E15	05/82
46156480	7GRGWR	L6V	PDP	E15	05/82
46156490	7GRCWB	L6T	PDP	E15	05/82
46156500	7GQERQ	L5Z	PDP	E15	05/82
46156510	7GPGRH	L5X	PDP	E15	05/86
46156520	7GPCS1	L5W	PDP	E15	05/86
46156530	7GOEMS	L5V	PDP	E15	05/86
46156540	7FTGND	L5T	PDP	E15	05/86
46156550	7FTCN3	L4Z	PDP	E15	05/86
46156560	7FSFCO	L4X	PDP	E15	05/86
46156570	7FRHCL	L4W	PDP	E15	05/86

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46156580	7FRDCH	L4V	PDP	E15	05/86
46156590	7FQFD8	L4T	PDP	E15	05/86
46156600	7FPHD5	L3Z	PDP	E15	05/86
46156610	7FPD8V	L3X	PDP	E15	05/86
46156620	7FOF8Y	L3W	PDP	E15	05/86
46156630	7ETH9V	L3V	PDP	E15	05/86
46156640	7ETD9X	L3T	PDP	E15	05/86
46156650	7ESFAU	L2Z	PDP	E15	05/86
46156660	7ERHAX	L2X	VAX	ETX	06/88
46156670	7ERDAZ	L2W	VAX	ETX	06/88
46156680	7EQFH2	L2V	VAX	ETX	06/88
46156690	7EPHBB	L2T	VAX	ETX	06/88
46156700	7EPECD	L1Z	VAX	ETX	06/88
46156710	7EOGCM	L1X	VAX	ETX	06/88
46156720	7EOCDP	L1W	PDP	E15	06/87
46156730	7DTEJ3	L1V	PDP	E15	06/87
46156740	7DSGKC	L1T	PDP	E15	06/87
46156750	7DSCKR	LZZ	PDP	E15	05/87
46156760	7DREQ5	LZX	PDP	E15	05/87
46156770	7DQGRE	LZW	PDP	E15	05/87
46206410	7HW1MB	L75	PDP	ETX	05/82
46206420	7HV3HK	L74	PDP	ETX	05/82
46206430	7HU5BZ	L73	PDP	ETX	05/82
46206440	7HU267	L72	PDP	ETX	05/82
46206450	7GZ40S	L66	PDP	E15	05/82
46206460	7GZ011	L65	PDP	E15	05/82
46206470	7GSWVM	L64	PDP	E15	05/82
46206480	7GRYW1	L63	PDP	E15	05/82

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46206490	7GRUQL	L62	PDP	E15	05/82
46206500	7GQWR6	L56	PDP	E15	05/82
46206510	7GPYLR	L55	PDP	E15	05/86
46206520	7GPUMC	L54	PDP	E15	05/86
46206530	7GOWM3	L53	PDP	E15	05/86
46206540	7FTYGT	L52	PDP	E15	05/86
46206550	7FTUHE	L46	PDP	E15	05/86
46206560	7FSWHB	L45	PDP	E15	05/86
46206570	7FRZ6W	L44	PDP	E15	05/86
46206580	7FRV6T	L43	PDP	E15	05/86
46206590	7FQX7J	L42	PDP	E15	05/86
46206600	7FPZ7G	L36	PDP	E15	05/86
46206610	7FPV8D	L35	PDP	E15	05/86
46206620	7FOX8A	L34	PDP	E15	05/86
46206630	7ETZ97	L33	PDP	E15	05/86
46206640	7ETV99	L32	PDP	E15	05/86
46206650	7ESXA6	L26	PDP	E15	05/86
46206660	7ERZA9	L25	VAX	ETX	06/88
46206670	7ERVBC	L24	VAX	ETX	06/88
46206680	7EQXBF	L23	VAX	ETX	06/88
46206690	7EPZBN	L22	VAX	ETX	06/88
46206700	7EPW6Q	L16	VAX	ETX	06/88
46206710	7EOY6Z	L15	VAX	ETX	06/88
46206720	7EOUD8	L14	PDP	E15	06/87
46206730	7DTWDH	L13	PDP	E15	06/87
46206740	7DSYEP	L12	PDP	E15	06/87
46206750	7DSUK4	LZ6	PDP	E15	05/87
46206760	7DRWLD	LZ5	PDP	E15	05/87

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46206770	7DQYLS	LZ4	PDP	E15	05/87
46256450	7GZM02	K6G	PDP	E15	05/82
46256460	7GZCUH	K6F	PDP	E15	05/82
46256470	7GYEPW	K6D	PDP	E15	05/82
46256480	7GXGPH	K6C	PDP	E15	05/82
46256490	7GXCKV	K6B	PDP	E15	05/82
46256500	7GWEKM	K5G	PDP	E15	05/82
46256510	7GVGL1	K5F	PDP	E15	08/86
46256520	7GVCFS	K5D	PDP	E15	08/86
46256530	7GUEGD	K5C	PDP	E15	08/86
46256540	7FZGG4	K5B	PDP	E15	08/86
46256550	7FZCBP	K4G	PDP	E15	08/86
46256560	7FYEBM	K4F	PDP	E15	08/86
46256570	7FXH67	K4D	PDP	E15	08/86
46256580	7FXD64	K4C	PDP	E15	08/86
46256590	7FWF1V	K4B	PDP	E15	08/86
46256600	7FVH1S	K3G	PDP	E15	08/86
46256610	7FVD2P	K3F	PDP	E15	08/86
46256620	7FUF2L	K3D	PDP	E15	08/86
46256630	7EZH3I	K3C	PDP	E15	08/86
46256640	7EZD3L	K3B	PDP	E15	08/86
46256650	7EYF4I	K2G	PDP	E15	08/86
46256660	7EXH4L	K2F	VAX	ETX	06/88
46256670	7EXD5O	K2D	VAX	ETX	06/88
46256680	7EWF5R	K2C	VAX	ETX	06/88
46256690	7EWC0U	K2B	VAX	ETX	06/88
46256700	7EVE63	K1G	VAX	ETX	06/88
46256710	7EUG76	K1F	VAX	ETX	06/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46256720	7EUC7L	K1D	PDP	E15	06/87
46256730	7DZE8O	K1C	PDP	E15	06/87
46256740	7DYGE3	K1B	PDP	E15	06/87
46256750	7DYCEH	KZG	PDP	E15	05/87
46256760	7DXEFQ	KZF	PDP	E15	05/87
46256770	7DWGL5	KZD	PDP	E15	05/87
46306450	7GZXZH	K6M	PDP	E15	05/86
46306460	7GZUOQ	K6L	PDP	E15	05/86
46306470	7GYWOB	K6K	PDP	E15	05/86
46306480	7GXYJQ	K6J	PDP	E15	05/86
46306490	7GXUJB	K6H	PDP	E15	05/86
46306500	7GWWEX	K5M	PDP	E15	05/86
46306510	7GVYFC	K5L	PDP	E15	05/86
46306520	7GVUF3	K5K	PDP	E15	05/86
46306530	7GUWAO	K5J	PDP	E15	05/86
46306540	7FZYAF	K5H	PDP	E15	05/86
46306550	7FZUB0	K4M	PDP	E15	05/86
46306560	7FYW5X	K4L	PDP	E15	05/86
46306570	7FXZ0I	K4K	PDP	E15	05/86
46306580	7FXV0F	K4J	PDP	E15	05/86
46306590	7FWX16	K4H	PDP	E15	05/86
46306600	7FVZ13	K3M	PDP	E15	05/86
46306610	7FVV20	K3L	PDP	E15	05/86
46306620	7FURWX	K3K	PDP	E15	05/86
46306630	7EZTXU	K3J	PDP	E15	05/86
46306640	7EZPXX	K3H	PDP	E15	05/86
46306650	7EYRYU	K2M	PDP	E15	05/86
46306660	7EXTYX	K2L	VAX	ETX	06/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46306670	7EXV50	K2K	VAX	ETX	06/88
46306680	7EWX53	K2J	VAX	ETX	06/88
46306690	7EWU07	K2H	VAX	ETX	06/88
46306700	7EVW0G	K1M	VAX	ETX	06/88
46306710	7EUY1J	K1L	VAX	ETX	06/88
46306720	7EUV1Y	K1K	PDP	E15	06/87
46306730	7DZW81	K1J	PDP	E15	06/87
46306740	7DYY8G	K1H	PDP	E15	06/87
46306750	7DYU9P	KZM	PDP	E15	05/87
46306760	7DXWF4	KZL	PDP	E15	05/87
46306770	7DWYGD	KZK	PDP	E15	05/87
46356450	7M5FTR	K6S	PDP	ETX	08/86
46356460	7M5CO6	K6R	PDP	ETX	08/86
46356470	7M4EIL	K6Q	PDP	ETX	08/86
46356480	7M3GJ0	K6P	PDP	ETX	08/86
46356490	7M3CDR	K6N	PDP	ETX	08/86
46356500	7M2EE7	K5S	PDP	ETX	08/86
46356510	7M1G8S	K5R	PDP	ETX	08/86
46356520	7M1C9D	K5Q	PDP	ETX	08/86
46356530	7M0E94	K5P	PDP	ETX	08/86
46356540	7L5G4P	K5N	PDP	ETX	08/86
46356550	7L5C4H	K4S	PDP	ETX	08/86
46356560	7L4E58	K4R	PDP	ETX	08/86
46356570	7L3G55	K4Q	PDP	ETX	08/86
46356580	7L37UQ	K4P	PDP	ETX	08/86
46356590	7L29UN	K4N	PDP	ETX	08/86
46356600	7L1BVK	K3S	PDP	ETX	08/86
46356610	7L17WC	K3R	PDP	ETX	08/86

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46356620	7L09W9	K3Q	PDP	ETX	08/86
46356630	7K5BX6	K3P	PDP	ETX	08/86
46356640	7K57X9	K3N	PDP	ETX	08/86
46356650	7K49Y6	K2S	PDP	ETX	08/86
46356660	7K3BYA	K2R	VAX	ETX	09/88
46356670	7K37ZD	K2Q	VAX	ETX	09/88
46356680	7K29ZM	K2P	VAX	ETX	09/88
46356690	7K26UJ	K2N	VAX	ETX	09/88
46356700	7K18US	K1S	VAX	ETX	09/88
46356710	7K0G11	K1R	VAX	ETX	09/88
46356720	7K0C1B	K1Q	PDP	ETX	06/87
46356730	7J5E2E	K1P	PDP	ETX	06/87
46356740	7J4G2T	K1N	PDP	ETX	06/87
46356750	7J4C92	KZS	PDP	ETX	05/87
46356760	7J3E9H	KZR	PDP	ETX	05/87
46356770	7J2GAR	KZQ	PDP	ETX	05/87
46406460	7M4ZNL	K6X	PDP	ETX	05/86
46406470	7M4WI1	K6W	PDP	ETX	05/86
46406480	7M3YCM	K6V	PDP	ETX	05/86
46406490	7M3UD1	K6T	PDP	ETX	05/86
46406500	7M2W7N	K5Z	PDP	ETX	05/86
46406510	7M1Y88	K5X	PDP	ETX	05/86
46406520	7M1U2T	K5W	PDP	ETX	05/86
46406530	7M0W3F	K5V	PDP	ETX	05/86
46406540	7L5Y40	K5T	PDP	ETX	05/86
46406550	7L5OYX	K4Z	PDP	ETX	05/86
46406560	7L4QZJ	K4X	PDP	ETX	05/86
46406570	7L3SZG	K4W	PDP	ETX	05/86

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46406580	7L3PU1	K4V	PDP	ETX	05/86
46406590	7L2ROZ	K4T	PDP	ETX	05/86
46406600	7L1TPW	K3Z	PDP	ETX	05/86
46406610	7L1PPT	K3X	PDP	ETX	05/86
46406620	7L0RQR	K3W	PDP	ETX	05/86
46406630	7K5TRI	K3V	PDP	ETX	05/86
46406640	7K5PRL	K3T	PDP	ETX	05/86
46406650	7K4RSI	K2Z	PDP	ETX	05/86
46406660	7K3TSS	K2X	VAX	ETX	09/88
46406670	7K3PTP	K2W	VAX	ETX	09/88
46406680	7K2RTY	K2V	VAX	ETX	09/88
46406690	7K2OOW	K2T	VAX	ETX	09/88
46406700	7K1QU5	K1Z	VAX	ETX	09/88
46406710	7K0SVE	K1X	VAX	ETX	09/88
46406720	7K0OWI	K1W	PDP	ETX	06/87
46406730	7J5QWX	K1V	PDP	ETX	06/87
46406740	7J4Y30	K1T	PDP	ETX	06/87
46406750	7J4U3G	KZZ	PDP	ETX	05/87
46406760	7J3W4P	KZX	PDP	ETX	05/87
46406770	7J2YAA	KZW	PDP	ETX	05/87
46456460	7MAHHV	K65	PDP	ETX	08/86
46456470	7MADHH	K64	PDP	ETX	08/86
46456480	7M9G6W	K63	PDP	ETX	08/86
46456490	7M9C6H	K62	PDP	ETX	08/86
46456500	7M8E1X	K56	PDP	ETX	08/86
46456510	7M7G2I	K55	PDP	ETX	08/86
46456520	7M7C24	K54	PDP	ETX	08/86
46456530	7M68XP	K53	PDP	ETX	08/86

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46456540	7LBAXH	K52	PDP	ETX	08/86
46456550	7LB6Y8	K46	PDP	ETX	08/86
46456560	7LA8TU	K45	PDP	ETX	08/86
46456570	7L9ATR	K44	PDP	ETX	08/86
46456580	7L97OI	K43	PDP	ETX	08/86
46456590	7L89OG	K42	PDP	ETX	08/86
46456600	7L7BP7	K36	PDP	ETX	10/86
46456610	7L77P5	K35	PDP	ETX	10/86
46456620	7L69Q2	K34	PDP	ETX	10/86
46456630	7KBBLU	K33	PDP	ETX	10/86
46456640	7KB7LX	K32	PDP	ETX	10/86
46456650	7KA9MV	K26	VAX	ETX	09/88
46456660	7K9BS4	K25	VAX	ETX	09/88
46456670	7K97T1	K24	VAX	ETX	09/88
46456680	7K89TB	K23	VAX	ETX	09/88
46456690	7K86OE	K22	VAX	ETX	09/88
46456700	7K78PI	K16	VAX	ETX	09/88
46456710	7K6APR	K15	VAX	ETX	09/88
46456720	7K66QV	K14	PDP	ETX	06/87
46456730	7JB8WA	K13	PDP	ETX	06/87
46456740	7JAAXD	K12	PDP	ETX	06/87
46456750	7JA6XT	KZ6	PDP	ETX	05/87
46456760	7J9E42	KZ5	PDP	ETX	05/87
46456770	7J8G5I	KZ4	PDP	ETX	05/87
46506460	7MAZGB	J6F	PDP	ETX	05/86
46506470	7MAVBQ	J6D	PDP	ETX	05/86
46506480	7M9Y66	J6C	PDP	ETX	05/86
46506490	7M9U0R	J6B	PDP	ETX	05/86

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46506500	7M8W17	J5G	PDP	ETX	05/86
46506510	7M7SVZ	J5F	PDP	ETX	05/86
46506520	7M7OWK	J5D	PDP	ETX	05/86
46506530	7M6QX0	J5C	PDP	ETX	05/86
46506540	7LBSRX	J5B	PDP	ETX	05/86
46506550	7LBOSJ	J4G	PDP	ETX	05/86
46506560	7LAQSA	J4F	PDP	ETX	05/86
46506570	7L9ST2	J4D	PDP	ETX	05/86
46506580	7L9PIU	J4C	PDP	ETX	05/86
46506590	7L8RIR	J4B	PDP	ETX	05/86
46506600	7L7TJJ	J3G	PDP	ETX	05/86
46506610	7L7PJG	J3F	PDP	ETX	05/86
46506620	7L6RKE	J3D	PDP	ETX	05/86
46506630	7KBTXH	J3C	PDP	ETX	05/86
46506640	7KBPL9	J3B	PDP	ETX	05/86
46506650	7KARMD	J2G	VAX	ETX	09/88
46506660	7K9TMG	J2F	VAX	ETX	09/88
46506670	7K9PNE	J2D	VAX	ETX	09/88
46506680	7K8RNN	J2C	VAX	ETX	09/88
46506690	7K8OIR	J2B	VAX	ETX	09/88
46506700	7K7QJU	J1G	VAX	ETX	09/88
46506710	7K6SP4	J1F	VAX	ETX	09/88
46506720	7K6OQ8	J1D	PDP	ETX	06/87
46506730	7JBQQN	J1C	PDP	ETX	06/87
46506740	7JASRX	J1B	PDP	ETX	06/87
46506750	7JAOY0	JZG	PDP	ETX	06/87
46506760	7J9QYM	JZF	PDP	ETX	05/87
46506770	7J8SZV	JZD	PDP	ETX	05/87

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46556470	7MGDB0	J6K	PDP	ETX	08/86
46556480	7MFF5M	J6J	PDP	ETX	08/86
46556490	7MFC01	J6H	PDP	ETX	08/86
46556500	7ME8UN	J5M	PDP	ETX	08/86
46556510	7MDAV9	J5L	PDP	ETX	08/86
46556520	7MD6QV	J5K	PDP	ETX	08/86
46556530	7MC8QM	J5J	PDP	ETX	08/86
46556540	7LHAR8	J5H	PDP	ETX	08/86
46556550	7LH6MU	J4M	PDP	ETX	08/86
46556560	7LG8ML	J4L	PDP	ETX	08/86
46556570	7LFAND	J4K	PDP	ETX	08/86
46556580	7LF6NB	J4J	PDP	ETX	08/86
46556590	7LE9I2	J4H	PDP	ETX	08/86
46556600	7LDBDU	J3M	PDP	ETX	08/86
46556610	7LD7DS	J3L	PDP	ETX	08/86
46556620	7LC9EQ	J3K	PDP	ETX	08/86
46556630	7KHBET	J3J	PDP	ETX	08/86
46556640	7KH7FR	J3H	PDP	ETX	08/86
46556650	7KG9GP	J2M	VAX	ETX	09/88
46556660	7KFBGS	J2L	VAX	ETX	09/88
46556670	7KF7HQ	J2K	VAX	ETX	09/88
46556680	7KEACU	J2J	VAX	ETX	09/88
46556690	7KE6I3	J2H	VAX	ETX	09/88
46556700	7KD8J7	J1M	VAX	ETX	09/88
46556710	7KCAJH	J1L	VAX	ETX	09/88
46556720	7KC6KK	J1K	PDP	ETX	06/87
46556730	7JH8LU	J1J	PDP	ETX	06/87
46556740	7JGARA	J1H	PDP	ETX	06/87

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46556750	7JG6SK	JZM	PDP	ETX	06/87
46556760	7JF8SZ	JZL	PDP	ETX	05/87
46556770	7JEAZ9	JZK	PDP	ETX	05/87
46606470	7MGV4G	J6Q	PDP	ETX	05/86
46606480	7MFRZW	J6P	PDP	ETX	05/86
46606490	7METZH	J6N	PDP	ETX	05/86
46606500	7MEQU3	J5S	PDP	ETX	05/86
46606510	7MDSPJ	J5R	PDP	ETX	05/86
46606520	7MDOPB	J5Q	PDP	ETX	05/86
46606530	7MCQKX	J5P	PDP	ETX	05/86
46606540	7LHSLJ	J5N	PDP	ETX	05/86
46606550	7LHOLA	J4S	PDP	ETX	05/86
46606560	7LGQM2	J4R	PDP	ETX	05/86
46606570	7LFSHO	J4Q	PDP	ETX	05/86
46606580	7LFOHM	J4P	PDP	ETX	05/86
46606590	7LERCE	J4N	PDP	ETX	05/86
46606600	7LDTD6	J3S	PDP	ETX	05/86
46606610	7LDPD9	J3R	PDP	ETX	05/86
46606620	7LCRE1	J3Q	PDP	ETX	05/86
46606630	7KHTE5	J3P	PDP	ETX	05/86
46606640	7KHPF3	J3N	PDP	ETX	05/86
46606650	7KGRG1	J2S	VAX	ETX	09/88
46606660	7KFTG5	J2R	VAX	ETX	09/88
46606670	7KFPH8	J2Q	VAX	ETX	09/88
46606680	7KESC6	J2P	VAX	ETX	09/88
46606690	7KEOCG	J2N	VAX	ETX	09/88
46606700	7KDQDK	J1S	VAX	ETX	09/88
46606710	7KCSEO	J1R	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46606720	7KCOK3	J1Q	PDP	ETX	06/87
46606730	7JHQL7	J1P	PDP	ETX	06/87
46606740	7JGSLN	J1N	PDP	ETX	06/87
46606750	7JGOMX	JZS	PDP	ETX	06/87
46606760	7JFQT7	JZR	PDP	ETX	05/87
46606770	7JESTN	JZQ	PDP	ETX	05/87
46656470	7MM7YQ	J6W	PDP	ETX	05/86
46656480	7ML9Z6	J6V	PDP	ETX	05/86
46656490	7MKBTR	J6T	PDP	ETX	05/86
46656500	7MK8OD	J5Z	PDP	ETX	05/86
46656510	7MJAIZ	J5X	PDP	ETX	05/86
46656520	7MJ6JL	J5W	PDP	ETX	05/86
46656530	7MI8K7	J5V	PDP	ETX	05/86
46656540	7LNAEZ	J5T	PDP	ETX	05/86
46656550	7LN6FL	J4Z	PDP	ETX	05/86
46656560	7LM8GD	J4X	PDP	ETX	05/86
46656570	7LLAG5	J4W	PDP	ETX	05/86
46656580	7LL6BX	J4V	PDP	ETX	05/86
46656590	7LK96P	J4T	PDP	ETX	05/86
46656600	7LJB6N	J3Z	PDP	ETX	05/86
46656610	7LJ77L	J3X	PDP	ETX	05/86
46656620	7LI98D	J3W	PDP	ETX	06/86
46656630	7KNB8H	J3V	PDP	ETX	06/86
46656640	7KN79F	J3T	PDP	ETX	06/86
46656650	7KM9AD	J2Z	VAX	ETX	09/88
46656660	7KLBAH	J2X	VAX	ETX	09/88
46656670	7KL7BL	J2W	VAX	ETX	09/88
46656680	7KKA6J	J2V	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46656690	7KK66T	J2T	VAX	ETX	09/88
46656700	7KJ87X	J1Z	VAX	ETX	09/88
46656710	7KIAE0	J1X	VAX	ETX	09/88
46656720	7KI6EG	J1W	PDP	ETX	06/87
46656730	7JN8FK	J1V	PDP	ETX	06/87
46656740	7JMAGU	J1T	PDP	ETX	06/87
46656750	7JM6MA	JZZ	PDP	ETX	06/87
46656760	7JL8NK	JZX	PDP	ETX	05/87
46656770	7JKBIU	JZW	PDP	ETX	05/87
46706470	7MMPX5	J64	PDP	ETX	05/86
46706480	7MLRSL	J63	PDP	ETX	05/86
46706490	7MKTT1	J62	PDP	ETX	05/86
46706500	7MKQIO	J56	PDP	ETX	05/86
46706510	7MJSIA	J55	PDP	ETX	05/86
46706520	7MJODW	J54	PDP	ETX	05/86
46706530	7MIQEI	J53	PDP	ETX	05/86
46706540	7LNSEA	J52	PDP	ETX	05/86
46706550	7LNO9W	J46	PDP	ETX	05/86
46706560	7LMQAO	J45	PDP	ETX	08/86
46706570	7LLSAG	J44	PDP	ETX	08/86
46706580	7LLOB8	J43	PDP	ETX	08/86
46706590	7LKR60	J42	PDP	ETX	08/86
46706600	7LJT0Y	J36	PDP	ETX	08/86
46706610	7LJP1X	J35	PDP	ETX	08/86
46706620	7LIR2P	J34	PDP	ETX	08/86
46706630	7KNT2T	J33	PDP	ETX	08/86
46706640	7KNP3R	J32	PDP	ETX	08/86
46706650	7KMR4P	J26	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46706660	7KLT4T	J25	VAX	ETX	09/88
46706670	7KLP5X	J24	VAX	ETX	09/88
46706680	7KKS0V	J23	VAX	ETX	09/88
46706690	7KKO65	J22	VAX	ETX	09/88
46706700	7KJQ79	J16	VAX	ETX	09/88
46706710	7KIS8D	J15	VAX	ETX	09/88
46706720	7KIO8T	J14	PDP	ETX	06/87
46706730	7JNQ9X	J13	PDP	ETX	06/87
46706740	7JMSG8	J12	PDP	ETX	06/87
46706750	7JMOHI	JZ6	PDP	ETX	06/87
46706760	7JLQHY	JZ5	PDP	ETX	05/87
46706770	7JKT18	JZ4	PDP	ETX	05/87
46756480	7MR9MV	H6C	PDP	ETX	08/86
46756490	7MQBMN	H6B	PDP	ETX	08/86
46756500	7MQ7N4	H5G	PDP	ETX	06/86
46756510	7MPACK	H5F	PDP	ETX	06/86
46756520	7MP6D6	H5D	PDP	ETX	06/86
46756530	7MO87Y	H5C	PDP	ETX	06/86
46756540	7LTA8L	H5B	PDP	ETX	06/86
46756550	7LT69D	H4G	PDP	ETX	06/86
46756560	7LS895	H4F	PDP	ETX	06/86
46756570	7LRA4X	H4D	PDP	ETX	06/86
46756580	7LR65J	H4C	PDP	ETX	06/86
46756590	7LQ90C	H4B	PDP	ETX	06/86
46756600	7LPB0G	H3G	VAX	ETX	09/88
46756610	7LP718	H3F	VAX	ETX	09/88
46756620	7LO926	H3D	VAX	ETX	09/88
46756630	7KTB24	H3C	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46756640	7KT733	H3B	VAX	ETX	09/88
46756650	7KS941	H2G	VAX	ETX	09/88
46756660	7KRB4B	H2F	VAX	ETX	09/88
46756670	7KR759	H2D	VAX	ETX	09/88
46756680	7KQA0E	H2C	VAX	ETX	09/88
46756690	7KQ61C	H2B	VAX	ETX	09/88
46756700	7KP81M	H1G	VAX	ETX	09/88
46756710	7KOA2W	H1F	VAX	ETX	09/88
46756720	7KO690	H1D	PDP	ETX	06/87
46756730	7JT89H	H1C	PDP	ETX	06/87
46756740	7JSAAL	H1B	PDP	ETX	06/87
46756750	7JS6BV	HZG	PDP	ETX	06/87
46756760	7JR8HB	HZF	PDP	ETX	05/87
46756770	7JQBCL	HZD	PDP	ETX	05/87
46806480	7MRRLH	H6J	PDP	ETX	09/86
46806490	7MQTGX	H6H	PDP	ETX	09/86
46806500	7MQPHE	H5M	PDP	ETX	09/86
46806510	7MPSC0	H5L	PDP	ETX	09/86
46806520	7MPO6N	H5K	PDP	ETX	09/86
46806530	7MOQ79	H5J	PDP	ETX	09/86
46806540	7LTS2V	H5H	PDP	ETX	09/86
46806550	7LTO3O	H4M	PDP	ETX	09/86
46806560	7LSQ3G	H4L	PDP	ETX	09/86
46806570	7LRS48	H4K	PDP	ETX	09/86
46806580	7LRO51	H4J	PDP	ETX	09/86
46806590	7LQKZZ	H4H	PDP	ETX	09/86
46806600	7LPNUR	H3M	VAX	ETX	09/88
46806610	7LPJVK	H3L	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46806620	7LOLWI	H3K	VAX	ETX	09/88
46806630	7KTNWG	H3J	VAX	ETX	09/88
46806640	7KTJXF	H3H	VAX	ETX	09/88
46806650	7KSLYD	H2M	VAX	ETX	09/88
46806660	7KRNYN	H2L	VAX	ETX	09/88
46806670	7KRJZM	H2K	VAX	ETX	09/88
46806680	7KQMUQ	H2J	VAX	ETX	09/88
46806690	7KQIVU	H2H	VAX	ETX	09/88
46806700	7KPQ15	H1M	VAX	ETX	09/88
46806710	7KOS29	H1L	VAX	ETX	09/88
46806720	7KOO3D	H1K	PDP	ETX	06/87
46806730	7JTQ4O	H1J	PDP	ETX	06/87
46806740	7JSS4Y	H1H	PDP	ETX	06/87
46806750	7JSOB8	HZM	PDP	ETX	06/87
46806760	7JRR6J	HZL	PDP	ETX	05/87
46806770	7JQTC5	HZK	PDP	ETX	05/87
46856480	7MX9FR	H6P	PDP	ETX	09/86
46856490	7MWBG7	H6N	PDP	ETX	09/86
46856500	7MW7BO	H5S	PDP	ETX	09/86
46856510	7MV9BG	H5R	PDP	ETX	09/86
46856520	7MV60X	H5Q	PDP	ETX	09/86
46856530	7MU81J	H5P	PDP	ETX	09/86
46856540	7LZA2C	H5N	PDP	ETX	09/86
46856550	7LZ624	H4S	PDP	ETX	09/86
46856560	7LY2XR	H4R	PDP	ETX	09/86
46856570	7LX4YJ	H4Q	PDP	ETX	09/86
46856580	7LX0ZC	H4P	PDP	ETX	09/86
46856590	7LW2ZA	H4N	PDP	ETX	09/86

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46856600	7LV5U3	H3S	VAX	ETX	09/88
46856610	7LV1PV	H3R	VAX	ETX	09/88
46856620	7LU3QU	H3Q	VAX	ETX	09/88
46856630	7KZ5QY	H3P	VAX	ETX	09/88
46856640	7KZ1RR	H3N	VAX	ETX	09/88
46856650	7KY3SV	H2S	VAX	ETX	09/88
46856660	7KX5SZ	H2R	VAX	ETX	09/88
46856670	7KX1TY	H2Q	VAX	ETX	09/88
46856680	7KW4U2	H2P	VAX	ETX	09/88
46856690	7KW0V7	H2N	VAX	ETX	09/88
46856700	7KV2VH	H1S	VAX	ETX	09/88
46856710	7KU4WM	H1R	VAX	ETX	09/88
46856720	7KU0XQ	H1Q	PDP	ETX	06/87
46856730	7JZ841	H1P	PDP	ETX	06/87
46856740	7JYA4H	H1N	PDP	ETX	06/87
46856750	7JY65M	HZS	PDP	ETX	06/87
46856760	7JX90W	HZR	PDP	ETX	05/87
46856770	7JWB7D	HZQ	PDP	ETX	05/87
46906480	7MXRF1	H6V	PDP	ETX	09/86
46906490	7MWT9N	H6T	PDP	ETX	09/86
46906500	7MWPA4	H5Z	PDP	ETX	09/86
46906510	7MVR5R	H5X	PDP	ETX	09/86
46906520	7MVO0D	H5W	PDP	ETX	09/86
46906530	7MUQ10	H5V	PDP	ETX	09/86
46906540	7LZMVT	H5T	PDP	ETX	09/86
46906550	7LZIWF	H4Z	PDP	ETX	09/86
46906560	7LYKX2	H4X	PDP	ETX	09/86
46906570	7LXMSU	H4W	PDP	ETX	09/86

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46906580	7LXIST	H4V	PDP	ETX	09/86
46906590	7LWKTm	H4T	PDP	ETX	09/86
46906600	7LVNOE	H3Z	VAX	ETX	09/88
46906610	7LVJP7	H3X	VAX	ETX	09/88
46906620	7LULPB	H3W	VAX	ETX	09/88
46906630	7KZNQA	H3V	VAX	ETX	09/88
46906640	7KZJR8	H3T	VAX	ETX	09/88
46906650	7KYLS7	H2Z	VAX	ETX	09/88
46906660	7KXNT6	H2X	VAX	ETX	09/88
46906670	7KXJTA	H2W	VAX	ETX	09/88
46906680	7KWMOF	H2V	VAX	ETX	09/88
46906690	7KWIPJ	H2T	VAX	ETX	09/88
46906700	7KVKQO	H1Z	VAX	ETX	09/88
46906710	7KUMQZ	H1X	VAX	ETX	09/88
46906720	7KUIX3	H1W	PDP	ETX	06/87
46906730	7JZKYE	H1V	PDP	ETX	06/87
46906740	7JYMZO	H1T	PDP	ETX	06/87
46906750	7JYO55	HZZ	PDP	ETX	06/87
46906760	7JXR0G	HZX	PDP	ETX	06/87
46906770	7JWT1Q	HZW	PDP	ETX	05/87
46956480	7S398H	H63	PDP	ETX	09/86
46956490	7S2B3X	H62	PDP	ETX	09/86
46956500	7S274E	H56	PDP	ETX	09/86
46956510	7S1951	H55	PDP	ETX	09/86
46956520	7S10UO	H54	PDP	ETX	09/86
46956530	7S02UG	H53	PDP	ETX	09/86
46956540	7R54V3	H52	PDP	ETX	09/86
46956550	7R50QQ	H46	PDP	ETX	09/86

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
46956560	7R42RJ	H45	PDP	ETX	09/86
46956570	7R34RB	H44	PDP	ETX	09/86
46956580	7R30S4	H43	PDP	ETX	09/86
46956590	7R22NX	H42	PDP	ETX	09/86
46956600	7R15IQ	H36	VAX	ETX	09/88
46956610	7R11JO	H35	VAX	ETX	09/88
46956620	7R03JN	H34	VAX	ETX	09/88
46956630	7Q55KM	H33	VAX	ETX	09/88
46956640	7Q51LK	H32	VAX	ETX	09/88
46956650	7Q43MJ	H26	VAX	ETX	09/88
46956660	7Q35NI	H25	VAX	ETX	09/88
46956670	7Q31NT	H24	VAX	ETX	09/88
46956680	7Q24IR	H23	VAX	ETX	09/88
46956690	7Q20JW	H22	VAX	ETX	09/88
46956700	7Q12Q1	H16	VAX	ETX	09/88
46956710	7Q04R6	H15	VAX	ETX	09/88
46956720	7Q00RM	H14	PDP	ETX	06/87
46956730	7P52SR	H13	PDP	ETX	06/87
46956740	7P44Z2	H12	PDP	ETX	07/87
46956750	7P41UC	HZ6	PDP	ETX	06/87
46956760	7P33UT	HZ5	PDP	ETX	06/87
46956770	7P2B14	HZ4	PDP	ETX	05/87
47006480	7S3R2R	G6C	PDP	ETX	09/86
47006490	7S2T37	G6B	PDP	ETX	09/86
47006500	7S2JYU	G5G	PDP	ETX	09/86
47006510	7S1LYH	G5F	PDP	ETX	09/86
47006520	7S0NZ4	G5D	PDP	ETX	09/86
47006530	7S0KOR	G5C	PDP	ETX	09/86

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47006540	7R5MPE	G5B	PDP	ETX	09/86
47006550	7R5IQ1	G4G	PDP	ETX	09/86
47006560	7R4KLU	G4F	PDP	ETX	09/86
47006570	7R3MLM	G4D	PDP	ETX	09/86
47006580	7R3IMF	G4C	PDP	ETX	09/86
47006590	7R2KN8	G4B	PDP	ETX	09/86
47006600	7R1NI1	G3G	VAX	ETX	09/88
47006610	7R1JJ0	G3F	VAX	ETX	09/88
47006620	7R0LDZ	G3D	VAX	ETX	09/88
47006630	7Q5NEY	G3C	VAX	ETX	09/88
47006640	7Q5JFW	G3B	VAX	ETX	09/88
47006650	7Q4LGV	G2G	VAX	ETX	09/88
47006660	7Q3NHU	G2F	VAX	ETX	09/88
47006670	7Q3JN5	G2D	VAX	ETX	09/88
47006680	7Q2MI4	G2C	VAX	ETX	09/88
47006690	7Q2IJ9	G2B	VAX	ETX	09/88
47006700	7Q1KKD	G1G	VAX	ETX	09/88
47006710	7Q0MLI	G1F	VAX	ETX	09/88
47006720	7Q0ILZ	G1D	PDP	ETX	06/87
47006730	7P5KS4	G1C	PDP	ETX	06/87
47006740	7P4MTF	G1B	PDP	ETX	07/87
47006750	7P4JOQ	GZG	PDP	ETX	06/87
47006760	7P3LV1	GZF	PDP	ETX	06/87
47006770	7P2NWC	GZD	PDP	ETX	05/87
47056470	7SA71J	G6K	PDP	ETX	09/86
47056480	7S9920	G6J	PDP	ETX	09/86
47056490	7S85WN	G6H	PDP	ETX	09/86
47056500	7S81XA	G5M	PDP	ETX	09/86

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47056510	7S73SR	G5L	PDP	ETX	09/86
47056520	7S65TE	G5K	PDP	ETX	09/86
47056530	7S62O1	G5J	PDP	ETX	09/86
47056540	7RB4JO	G5H	PDP	ETX	09/86
47056550	7RB0JH	G4M	PDP	ETX	09/86
47056560	7RA2KA	G4L	PDP	ETX	09/86
47056570	7R94FX	G4K	PDP	ETX	09/86
47056580	7R90GQ	G4J	PDP	ETX	09/86
47056590	7R82HJ	G4H	PDP	ETX	09/86
47056600	7R75CC	G3M	VAX	ETX	09/88
47056610	7R71CH	G3L	VAX	ETX	09/88
47056620	7R63DA	G3K	VAX	ETX	09/88
47056630	7QB5E9	G3J	VAX	ETX	09/88
47056640	7QB1F8	G3H	VAX	ETX	09/88
47056650	7QA3G7	G2M	VAX	ETX	09/88
47056660	7Q95H6	G2L	VAX	ETX	09/88
47056670	7Q91HH	G2K	VAX	ETX	09/88
47056680	7Q84CG	G2J	VAX	ETX	09/88
47056690	7Q80DL	G2H	VAX	ETX	09/88
47056700	7Q72EQ	G1M	VAX	ETX	09/88
47056710	7Q64FV	G1L	VAX	ETX	09/88
47056720	7Q60M6	G1K	VAX	ETX	09/88
47056730	7PB2MH	G1J	VAX	ETX	09/88
47056740	7PA4NS	G1H	VAX	ETX	09/88
47056750	7PA1O3	GZM	PDP	ETX	06/87
47056760	7P93PE	GZL	PDP	ETX	06/87
47056770	7P85QP	GZK	PDP	ETX	05/87
47056780	7P81X6	GZJ	PDP	ETX	06/87

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47106490	7S8NW3	G6N	PDP	ETX	09/86
47106500	7S8JRL	G5S	PDP	ETX	09/86
47106520	7S6NNP	G5Q	PDP	ETX	09/86
47106530	7S6KIC	G5P	PDP	ETX	09/86
47106540	7RBMI5	G5N	PDP	ETX	09/86
47106550	7RBIDS	G4S	PDP	ETX	09/86
47106560	7RAKEL	G4R	PDP	ETX	09/86
47106570	7R9MFE	G4Q	PDP	ETX	09/86
47106580	7R9IG2	G4P	PDP	ETX	09/86
47106590	7R8KBV	G4N	PDP	ETX	09/86
47106600	7R7N6U	G3S	VAX	ETX	09/88
47106610	7R7J6T	G3R	VAX	ETX	09/88
47106620	7R6L7S	G3Q	VAX	ETX	09/88
47106630	7QBN8L	G3P	VAX	ETX	09/88
47106640	7QBJ9K	G3N	VAX	ETX	09/88
47106650	7QALAJ	G2S	VAX	ETX	09/88
47106660	7Q9NBO	G2R	VAX	ETX	09/88
47106670	7Q9K6O	G2Q	VAX	ETX	09/88
47106680	7Q8M6Z	G2P	VAX	ETX	09/88
47106690	7Q8I7Y	G2N	VAX	ETX	09/88
47106700	7Q7KE3	G1S	VAX	ETX	09/88
47106710	7Q6MFE	G1R	VAX	ETX	09/88
47106720	7Q6IGJ	G1Q	VAX	ETX	09/88
47106730	7PBKHO	G1P	VAX	ETX	09/88
47106740	7PAMN5	G1N	VAX	ETX	09/88
47106750	7PAJIH	GZS	VAX	ETX	09/88
47106760	7P9LJS	GZR	PDP	ETX	06/87
47106770	7P8NQ3	GZQ	PDP	ETX	05/87

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47106780	7P8JRK	GZP	PDP	ETX	06/87
47106790	7P7LY1	GZN	PDP	ETX	06/87
47156500	7SE1LV	G5Z	PDP	ETX	09/86
47156510	7SD3MI	G5X	PDP	ETX	09/86
47156520	7SC5M5	G5W	PDP	ETX	09/86
47156530	7SC1HS	G5V	PDP	ETX	09/86
47156540	7RH4CG	G5T	PDP	ETX	09/86
47156550	7RH0D9	G4Z	PDP	ETX	09/86
47156560	7RG28W	G4X	PDP	ETX	09/86
47156570	7RF49P	G4W	PDP	ETX	09/86
47156580	7RF0AJ	G4V	PDP	ETX	09/86
47156590	7RE2BC	G4T	PDP	ETX	09/86
47156600	7RD4BB	G3Z	VAX	ETX	09/88
47156610	7RD164	G3X	VAX	ETX	09/88
47156620	7RC374	G3W	VAX	ETX	09/88
47156630	7QH52X	G3V	VAX	ETX	09/88
47156640	7QH13W	G3T	VAX	ETX	09/88
47156650	7QG34V	G2Z	VAX	ETX	09/88
47156660	7QF5B1	G2X	VAX	ETX	09/88
47156670	7QF260	G2W	VAX	ETX	09/88
47156680	7QE46B	G2V	VAX	ETX	09/88
47156690	7QE07G	G2T	VAX	ETX	09/88
47156700	7QD28M	G1Z	VAX	ETX	09/88
47156710	7QC49R	G1X	VAX	ETX	09/88
47156720	7QC0AW	G1W	VAX	ETX	09/88
47156730	7PH2H7	G1V	VAX	ETX	09/88
47156740	7PG5CD	G1T	VAX	ETX	09/88
47156750	7PG1DO	GZZ	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47156760	7PF3J5	GZX	VAX	ETX	09/88
47156770	7PE5KM	GZW	PDP	ETX	05/87
47156780	7PE1LY	GZV	PDP	ETX	06/87
47156790	7PD3SF	GZT	VAX	ETX	09/88
47156880	7ODBIK	GWV	VAX	ETX	06/91
47156890	7OD7PE	GWT	VAX	ETX	06/91
47206490	7SENJT	G62	VAX	ETX	09/86
47206500	7SEJKB	G56	PDP	ETX	09/86
47206510	7SDLFY	G55	PDP	ETX	09/86
47206520	7SCNGG	G54	PDP	ETX	09/86
47206530	7SCJH3	G53	PDP	ETX	09/86
47206540	7RHM6Q	G52	PDP	ETX	09/86
47206550	7RHI7K	G46	PDP	ETX	09/86
47206560	7RGK87	G45	PDP	ETX	09/86
47206570	7RFM90	G44	PDP	ETX	09/86
47206580	7RFI4U	G43	PDP	ETX	09/86
47206590	7REK4T	G42	PDP	ETX	09/86
47206600	7RDM5N	G36	VAX	ETX	09/88
47206610	7RDJ0G	G35	VAX	ETX	09/88
47206620	7RCL1F	G34	VAX	ETX	09/88
47206630	7QHN2F	G33	VAX	ETX	09/88
47206640	7QHJ38	G32	VAX	ETX	09/88
47206650	7QGL4D	G26	VAX	ETX	09/88
47206660	7QFN5D	G25	VAX	ETX	09/88
47206670	7QFK0C	G24	VAX	ETX	09/88
47206680	7QEM1I	G23	VAX	ETX	09/88
47206690	7QEI1T	G22	VAX	ETX	09/88
47206700	7QDK2Y	G16	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47206710	7QCM94	G15	VAX	ETX	09/88
47206720	7QCIA9	G14	VAX	ETX	09/88
47206730	7PHKBK	G13	VAX	ETX	09/88
47206740	7PGN6Q	G12	VAX	ETX	09/88
47206750	7PGJD1	GZ6	VAX	ETX	09/88
47206760	7PFLED	GZ5	VAX	ETX	09/88
47206770	7PENFU	GZ4	VAX	ETX	09/88
47206780	7PEJLB	GZ3	VAX	ETX	09/88
47206790	7PDLMT	GZ2	VAX	ETX	09/88
47206800	7PCNTA	GX6	VAX	ETX	09/88
47206860	7OFOBI	GW5	VAX	ETX	06/91
47206870	7OERC6	GW4	VAX	ETX	06/91
47206880	7ODTI5	GW3	VAX	ETX	06/91
47206890	7ODPJT	GW2	VAX	ETX	06/91
47206900	7OCRQM	GV6	VAX	ETX	06/91
47256490	7SK5J3	F6B	VAX	ETX	10/89
47256500	7SK1EL	F5G	VAX	ETX	10/89
47256510	7SJ3F8	F5F	VAX	ETX	10/89
47256520	7SI5AW	F5D	VAX	ETX	10/89
47256530	7SI1BJ	F5C	VAX	ETX	09/89
47256540	7RN467	F5B	VAX	ETX	09/89
47256550	7RN01V	F4G	VAX	ETX	09/89
47256560	7RM22I	F4F	VAX	ETX	09/89
47256570	7RL43C	F4D	VAX	ETX	09/89
47256580	7RL03B	F4C	VAX	ETX	09/89
47256590	7RK245	F4B	VAX	ETX	09/89
47256600	7RDYZY	F3G	VAX	ETX	09/88
47256610	7RDVUS	F3F	VAX	ETX	09/88

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47256620	7RCXVR	F3D	VAX	ETX	09/88
47256630	7QHZWR	F3C	VAX	ETX	09/88
47256640	7QH VXQ	F3B	VAX	ETX	09/88
47256650	7QGXYQ	F2G	VAX	ETX	09/88
47256660	7QFZZP	F2F	VAX	ETX	09/88
47256670	7QFWUP	F2D	VAX	ETX	09/88
47256680	7QEYVU	F2C	VAX	ETX	09/88
47256690	7QK020	F2B	VAX	ETX	09/88
47256700	7QJ22B	F1G	VAX	ETX	09/88
47256710	7QI43H	F1F	VAX	ETX	09/88
47256720	7QI04M	F1D	VAX	ETX	09/88
47256730	7PN25Y	F1C	VAX	ETX	09/88
47256740	7PM569	F1B	VAX	ETX	09/88
47256750	7PM17L	FZG	VAX	ETX	09/88
47256760	7PL38W	FZF	VAX	ETX	09/88
47256770	7PK5F8	FZD	VAX	ETX	09/88
47256780	7PK1GJ	FZC	VAX	ETX	09/88
47256790	7PJ3N1	FZB	VAX	ETX	09/88
47256800	7PJ0II	FXG	VAX	ETX	09/88
47256810	7PI2P0	FXF	VAX	ETX	09/88
47256830	7ON0W5	FXC	VAX	ETX	06/91
47256840	7OM2XS	FXB	VAX	ETX	06/91
47256850	7OLA4A	FWG	VAX	ETX	06/91
47256860	7OL65X	FWF	VAX	ETX	06/91
47256870	7OK96L	FWD	VAX	ETX	06/91
47256880	7OJBDE	FWC	VAX	ETX	06/91
47256890	7OJ7K2	FWB	VAX	ETX	06/91
47256900	7OI9LV	FVG	VAX	ETX	06/91

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47306490	7SKNDD	F6H	VAX	ETX	09/89
47306500	7SKJ8V	F5M	VAX	ETX	09/89
47306510	7SJL9J	F5L	VAX	ETX	09/89
47306520	7SINA6	F5K	VAX	ETX	09/89
47306530	7SIJ5U	F5J	VAX	ETX	09/89
47306540	7RNM0I	F5H	VAX	ETX	09/89
47306550	7RNI0B	F4M	VAX	ETX	09/89
47306560	7RMK15	F4L	VAX	ETX	09/89
47306570	7RLGWT	F4K	VAX	ETX	09/89
47306580	7RLCXM	F4J	VAX	ETX	09/89
47306590	7RKEYG	F4H	VAX	ETX	09/89
47306600	7RJGZ9	F3M	VAX	ETX	09/89
47306610	7RJDU9	F3L	VAX	ETX	09/89
47306620	7RIFV3	F3K	VAX	ETX	09/89
47306630	7QNH2	F3J	VAX	ETX	09/89
47306640	7QNDX2	F3H	VAX	ETX	06/91
47306650	7QMFY2	F2M	VAX	ETX	06/91
47306660	7QLHZ1	F2L	VAX	ETX	06/91
47306670	7QLEU7	F2K	VAX	ETX	06/91
47306680	7QKGV7	F2J	VAX	ETX	06/91
47306690	7QKCWC	F2H	VAX	ETX	06/91
47306700	7QJEXI	F1M	VAX	ETX	06/91
47306710	7QIGXT	F1L	VAX	ETX	06/91
47306720	7QII45	F1K	VAX	ETX	06/91
47306730	7PNK5B	F1J	VAX	ETX	06/91
47306740	7PMN0M	F1H	VAX	ETX	06/91
47306750	7PMJ1Y	FZM	VAX	ETX	06/91
47306760	7PLL8A	FZL	VAX	ETX	06/91

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47306770	7PKN9L	FZK	VAX	ETX	06/91
47306780	7PKJAX	FZJ	VAX	ETX	06/91
47306790	7PJLHF	FZH	VAX	ETX	06/91
47306800	7PJICW	FXM	VAX	ETX	06/91
47306810	7PIKJE	FXL	VAX	ETX	06/91
47306820	7ONMKV	FXK	VAX	ETX	06/91
47306830	7ONIRD	FXJ	VAX	ETX	06/91
47306840	7OMKY1	FXH	VAX	ETX	06/91
47306850	7OLMZO	FWM	VAX	ETX	06/91
47306860	7OLP06	FWL	VAX	ETX	06/91
47306870	7OKR70	FWK	VAX	ETX	06/91
47306880	7OJT7T	FWJ	VAX	ETX	06/91
47306890	7OJPEH	FWH	VAX	ETX	06/91
47306900	7OIRLB	FVM	VAX	ETX	06/91
47356490	7SQ56T	F6N	VAX	ETX	09/89
47356500	7SQ17H	F5S	VAX	ETX	09/89
47356510	7SP32Z	F5R	VAX	ETX	09/89
47356520	7SO53N	F5Q	VAX	ETX	09/89
47356530	7SO14B	F5P	VAX	ETX	09/89
47356540	7RNXYZ	F5N	VAX	ETX	09/89
47356550	7RNUUM	F4S	VAX	ETX	09/89
47356560	7RMWVG	F4R	VAX	ETX	09/89
47356570	7RLYW4	F4Q	VAX	ETX	09/89
47356580	7RLURX	F4P	VAX	ETX	09/89
47356590	7RKWSR	F4N	VAX	ETX	09/89
47356600	7RJYTL	F3S	VAX	ETX	09/89
47356610	7RJVOL	F3R	VAX	ETX	09/89
47356620	7RIXPE	F3Q	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47356630	7QNZQE	F3P	VAX	ETX	09/89
47356640	7QNVRE	F3N	VAX	ETX	06/91
47356650	7QMXSE	F2S	VAX	ETX	06/91
47356660	7QLZTD	F2R	VAX	ETX	06/91
47356670	7QLWOJ	F2Q	VAX	ETX	06/91
47356680	7QKYPJ	F2P	VAX	ETX	06/91
47356690	7QKUQP	F2N	VAX	ETX	06/91
47356700	7QJWRU	F1S	VAX	ETX	06/91
47356710	7QIYY0	F1R	VAX	ETX	06/91
47356720	7QIUZC	F1Q	VAX	ETX	06/91
47356730	7PNXUI	F1P	VAX	ETX	06/91
47356740	7PMZVU	F1N	VAX	ETX	06/91
47356750	7PS11B	FZS	VAX	ETX	06/91
47356760	7PR32N	FZR	VAX	ETX	06/91
47356770	7PQ53Z	FZQ	VAX	ETX	06/91
47356780	7PQ1AH	FZP	VAX	ETX	06/91
47356790	7PP3BS	FZN	VAX	ETX	06/91
47356800	7PP0CA	FXS	VAX	ETX	06/91
47356810	7PO2DS	FXR	VAX	ETX	06/91
47356820	7OT4KA	FXQ	VAX	ETX	06/91
47356830	7OT0LR	FXP	VAX	ETX	06/91
47356840	7OS2SF	FXN	VAX	ETX	06/91
47356850	7OR4Z3	FWS	VAX	ETX	06/91
47356860	7OR1UR	FWR	VAX	ETX	06/91
47356870	7OQ91F	FWQ	VAX	ETX	06/91
47406480	7SRKBM	F6V	VAX	ETX	09/89
47406490	7SQN63	F6T	VAX	ETX	09/89
47406500	7SQJ1R	F5Z	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47406510	7SPL29	F5X	VAX	ETX	09/89
47406520	7SOHXX	F5W	VAX	ETX	09/89
47406530	7SODYL	F5V	VAX	ETX	09/89
47406540	7RTFZ9	F5T	VAX	ETX	09/89
47406550	7RTCX	F4Z	VAX	ETX	09/89
47406560	7RSEPR	F4X	VAX	ETX	09/89
47406570	7RRGQF	F4W	VAX	ETX	09/89
47406580	7RRCR9	F4V	VAX	ETX	09/89
47406590	7RQES2	F4T	VAX	ETX	09/89
47406600	7RPGT2	F3Z	VAX	ETX	09/89
47406610	7RPDIW	F3X	VAX	ETX	09/89
47406620	7ROFJQ	F3W	VAX	ETX	09/89
47406630	7QTHKQ	F3V	VAX	ETX	09/89
47406640	7QTDLQ	F3T	VAX	ETX	09/89
47406650	7QSFMQ	F2Z	VAX	ETX	09/89
47406660	7QRHNQ	F2X	VAX	ETX	09/89
47406670	7QREIW	F2W	VAX	ETX	09/89
47406680	7QQGP1	F2V	VAX	ETX	09/89
47406690	7QQCQ1	F2T	VAX	ETX	09/89
47406700	7QPER7	F1Z	VAX	ETX	06/91
47406710	7QOGSD	F1X	VAX	ETX	06/91
47406720	7QOCTP	F1W	VAX	ETX	06/91
47406730	7PTFOV	F1V	VAX	ETX	06/91
47406740	7PSHV7	F1T	VAX	ETX	06/91
47406750	7PSDWJ	FZZ	VAX	ETX	06/91
47406760	7PRFXV	FZX	VAX	ETX	06/91
47406770	7PQN46	FZW	VAX	ETX	06/91
47406780	7PQJ50	FZV	VAX	ETX	06/91

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47406790	7PPM60	FZT	VAX	ETX	06/91
47406800	7PPI7I	FXZ	VAX	ETX	06/91
47406810	7POKE0	FXX	VAX	ETX	06/91
47406820	7OTMFI	FXW	VAX	ETX	06/91
47406830	7OTIM6	FXV	VAX	ETX	06/91
47406840	7OSKNO	FXT	VAX	ETX	06/91
47406850	7ORNOC	FWZ	VAX	ETX	06/91
47406860	7ORJV0	FWX	VAX	ETX	06/91
47456480	7SX25V	F63	VAX	ETX	09/89
47456490	7SW50J	F62	VAX	ETX	09/89
47456500	7SW111	F56	VAX	ETX	09/89
47456510	7SPXWJ	F55	VAX	ETX	09/89
47456520	7SOZX8	F54	VAX	ETX	09/89
47456530	7SOVSW	F53	VAX	ETX	09/89
47456540	7RTXTK	F52	VAX	ETX	09/89
47456550	7RTUOE	F46	VAX	ETX	09/89
47456560	7RSWP2	F45	VAX	ETX	09/89
47456570	7RRYKW	F44	VAX	ETX	09/89
47456580	7RRULK	F43	VAX	ETX	09/89
47456590	7RQWME	F42	VAX	ETX	08/90
47456600	7RPYNE	F36	VAX	ETX	08/90
47456610	7RPVI8	F35	VAX	ETX	08/90
47456620	7ROXJ8	F34	VAX	ETX	08/90
47456630	7QTZK2	F33	VAX	ETX	08/90
47456640	7QTVL2	F32	VAX	ETX	09/89
47456650	7QSXM2	F26	VAX	ETX	09/89
47456660	7QRZN8	F25	VAX	ETX	09/89
47456670	7QRWI8	F24	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47456680	7QQYJE	F23	VAX	ETX	09/89
47456690	7QQUKE	F22	VAX	ETX	09/89
47456700	7QPWLK	F16	VAX	ETX	09/89
47456710	7QOYMW	F15	VAX	ETX	09/89
47456720	7QOUT2	F14	VAX	ETX	09/89
47456730	7PTXOE	F13	VAX	ETX	09/89
47456740	7PSZPK	F12	VAX	ETX	09/89
47456750	7PSVQW	FZ6	VAX	ETX	06/91
47456760	7PRXX8	FZ5	VAX	ETX	06/91
47456770	7PQZYK	FZ4	VAX	ETX	06/91
47456780	7PW152	FZ3	VAX	ETX	06/91
47456790	7PV40K	FZ2	VAX	ETX	06/91
47456800	7PV01W	FX6	VAX	ETX	06/91
47456810	7PU28E	FX5	VAX	ETX	06/91
47456820	7OZ49W	FX4	VAX	ETX	06/91
47456830	7OZ0GK	FX3	VAX	ETX	06/91
47456840	7OY2N2	FX2	VAX	ETX	06/91
47456850	7OX5IQ	FW6	VAX	ETX	06/91
47506480	7SXX4B	D6C	VAX	ETX	09/89
47506490	7SWGZZ	D6B	VAX	ETX	09/89
47506500	7SWDVC	D5G	VAX	ETX	09/89
47506510	7SVFW0	D5F	VAX	ETX	09/89
47506520	7SUHRI	D5D	VAX	ETX	09/89
47506530	7SUDS6	D5C	VAX	ETX	10/89
47506540	7RZFNU	D5B	VAX	ETX	10/89
47506550	7RZCIO	D4G	VAX	ETX	10/89
47506560	7RYEJD	D4F	VAX	ETX	09/89
47506570	7RXGK7	D4D	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47506580	7RXCL1	D4C	VAX	ETX	09/89
47506590	7RWEQV	D4B	VAX	ETX	09/89
47506600	7RVGHP	D3G	VAX	ETX	09/89
47506610	7RVDCJ	D3F	VAX	ETX	10/89
47506620	7RUFDJ	D3D	VAX	ETX	10/89
47506630	7QZHEE	D3C	VAX	ETX	10/89
47506640	7QZDFE	D3B	VAX	ETX	10/89
47506650	7QYFGE	D2G	VAX	ETX	10/89
47506660	7QXHHK	D2F	VAX	ETX	10/89
47506670	7QXECK	D2D	VAX	ETX	09/89
47506680	7QWGDQ	D2C	VAX	ETX	09/89
47506690	7QWCEW	D2B	VAX	ETX	09/89
47506700	7QVEL3	D1G	VAX	ETX	09/89
47506710	7QUGM9	D1F	VAX	ETX	09/89
47506720	7QUCNF	D1D	VAX	ETX	09/89
47506730	7PZFIR	D1C	VAX	ETX	09/89
47506740	7PYHJX	D1B	VAX	ETX	09/89
47506750	7PYDQ9	DZG	VAX	ETX	06/91
47506760	7PXFRM	DZF	VAX	ETX	06/91
47506770	7PWHY4	DZD	VAX	ETX	06/91
47506780	7PWDZG	DZC	VAX	ETX	06/91
47506790	7PVGUY	DZB	VAX	ETX	06/91
47506800	7PVI1A	DXG	VAX	ETX	06/91
47506810	7PUK2S	DXF	VAX	ETX	06/91
47506820	7OZM9H	DXD	VAX	ETX	06/91
47506830	7OZIAZ	DXC	VAX	ETX	06/91
47506840	7OYKHH	DXB	VAX	ETX	06/91
47556480	7SXWYR	D6J	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47556490	7SWYZ9	D6H	VAX	ETX	09/89
47556500	7SWVOS	D5M	VAX	ETX	09/89
47556510	7SVXPG	D5L	VAX	ETX	09/89
47556520	7SUZQ4	D5K	VAX	ETX	09/89
47556530	7SUVLN	D5J	VAX	ETX	09/89
47556540	7RZXMH	D5H	VAX	ETX	09/89
47556550	7RYZN5	D4M	VAX	ETX	09/89
47556560	7RYWCT	D4L	VAX	ETX	09/89
47556570	7RXYEI	D4K	VAX	ETX	09/89
47556580	7RXUFC	D4J	VAX	ETX	09/89
47556590	7RWWG6	D4H	VAX	ETX	09/89
47556600	7RVYH1	D3M	VAX	ETX	09/89
47556610	7RVV6V	D3L	VAX	ETX	09/89
47556620	7RUX7V	D3K	VAX	ETX	09/89
47556630	7QZZ8V	D3J	VAX	ETX	09/89
47556640	7QZV9W	D3H	VAX	ETX	09/89
47556650	7QYXAW	D2M	VAX	ETX	09/89
47556660	7QXZBW	D2L	VAX	ETX	09/89
47556670	7QXW6W	D2K	VAX	ETX	09/89
47556680	7QWYD3	D2J	VAX	ETX	09/89
47556690	7QWUE9	D2H	VAX	ETX	09/89
47556700	7QVWFF	D1M	VAX	ETX	09/89
47556710	7QUYGM	D1L	VAX	ETX	09/89
47556720	7QUUHS	D1K	VAX	ETX	09/89
47556730	7PZXI4	D1J	VAX	ETX	09/89
47556740	7PYZJG	D1H	VAX	ETX	09/89
47556750	7PYVKN	DZM	VAX	ETX	06/91
47556760	7PXXR5	DZL	VAX	ETX	06/91

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47556770	7PWZSH	DZK	VAX	ETX	06/91
47556780	7PWWO0	DZJ	VAX	ETX	06/91
47556790	7PVYV6	DZH	VAX	ETX	06/91
47556800	7PVUWO	DXM	VAX	ETX	06/91
47556810	7V0236	DXL	VAX	ETX	06/91
47556820	7U544P	DXK	VAX	ETX	06/91
47556830	7U50B7	DXJ	VAX	ETX	06/91
47606470	7Y4CXJ	D6Q	VAX	ETX	09/89
47606480	7Y3EY1	D6P	VAX	ETX	09/89
47606490	7Y2GTJ	D6N	VAX	ETX	09/89
47606500	7Y2DO2	D5S	VAX	ETX	09/89
47606510	7Y1FJQ	D5R	VAX	ETX	09/89
47606520	7Y0HKF	D5Q	VAX	ETX	09/89
47606530	7Y0DL3	D5P	VAX	ETX	09/89
47606540	7X5FGR	D5N	VAX	ETX	09/89
47606550	7X4HHG	D4S	VAX	ETX	09/89
47606560	7X4EC4	D4R	VAX	ETX	09/89
47606570	7X3G7Z	D4Q	VAX	ETX	09/89
47606580	7X3C8T	D4P	VAX	ETX	09/89
47606590	7X2EAI	D4N	VAX	ETX	09/89
47606600	7X1GBC	D3S	VAX	ETX	09/89
47606610	7X1D6C	D3R	VAX	ETX	09/89
47606620	7X0F77	D3Q	VAX	ETX	09/89
47606630	7W5H87	D3P	VAX	ETX	09/89
47606640	7W5D98	D3N	VAX	ETX	09/89
47606650	7W4FA8	D2S	VAX	ETX	09/89
47606660	7W3HB8	D2R	VAX	ETX	09/89
47606670	7W3E6F	D2Q	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47606680	7W2G7F	D2P	VAX	ETX	09/89
47606690	7W2C8M	D2N	VAX	ETX	09/89
47606700	7W1E9S	D1S	VAX	ETX	09/89
47606710	7W0GAY	D1R	VAX	ETX	09/89
47606720	7W0CH5	D1Q	VAX	ETX	09/89
47606730	7V5FCH	D1P	VAX	ETX	09/89
47606740	7V4HEO	D1N	VAX	ETX	09/89
47606750	7V4DL0	DZS	VAX	ETX	06/91
47606760	7V3FMD	DZR	VAX	ETX	06/91
47606770	7V2HNP	DZQ	VAX	ETX	06/91
47606780	7V2EO1	DZP	VAX	HYB	06/91
47606790	7V1GPK	DZN	VAX	ETX	06/91
47606800	7V1CW2	DXS	VAX	ETX	06/91
47606810	7V0EXL	DXR	VAX	ETX	06/91
47606820	7U5M43	DXQ	VAX	ETX	06/91
47606830	7U5I5M	DXP	VAX	ETX	06/91
47656470	7Y4UQY	D6W	VAX	ETX	09/89
47656480	7Y3WRH	D6V	VAX	ETX	09/89
47656490	7Y2YMZ	D6T	VAX	ETX	09/89
47656500	7Y2VII	D5Z	VAX	ETX	09/89
47656510	7Y1XJ0	D5X	VAX	ETX	09/89
47656520	7Y0ZEP	D5W	VAX	ETX	09/89
47656530	7Y0VFE	D5V	VAX	ETX	09/89
47656540	7X5XG2	D5T	VAX	ETX	09/89
47656550	7X4ZBR	D4Z	VAX	ETX	09/89
47656560	7X4W6L	D4X	VAX	ETX	09/89
47656570	7X3Y7A	D4W	VAX	ETX	09/89
47656580	7X3U84	D4V	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47656590	7X2W3Z	D4T	VAX	ETX	09/89
47656600	7X1Y4T	D3Z	VAX	ETX	09/89
47656610	7X1V0O	D3X	VAX	ETX	09/89
47656620	7X0X1I	D3W	VAX	ETX	09/89
47656630	7W5Z2J	D3V	VAX	ETX	09/89
47656640	7W5V3K	D3T	VAX	ETX	09/89
47656650	7W4X4K	D2Z	VAX	ETX	09/89
47656660	7W3Z5L	D2X	VAX	ETX	09/89
47656670	7W3W0R	D2W	VAX	ETX	09/89
47656680	7W2Y1S	D2V	VAX	ETX	09/89
47656690	7W2U2Y	D2T	VAX	ETX	09/89
47656700	7W1W95	D1Z	VAX	ETX	09/89
47656710	7W0YAB	D1X	VAX	ETX	09/89
47656720	7W0V6I	D1W	VAX	ETX	09/89
47656730	7V5X7O	D1V	VAX	ETX	09/89
47656740	7V4ZE1	D1T	VAX	ETX	09/89
47656750	7V4VFD	DZZ	VAX	ETX	06/91
47656760	7V3XGQ	DZX	VAX	ETX	06/91
47656770	7V2ZN3	DZW	VAX	ETX	06/91
47656780	7V2WIL	DZV	VAX	ETX	06/91
47656790	7V1YJY	DZT	VAX	HYB	06/91
47656800	7V1UQG	DXZ	VAX	ETX	06/91
47656810	7V0WRZ	DXX	VAX	ETX	06/91
47656820	7U5YYH	DXW	VAX	ETX	06/91
47656830	7U5VUU	DXV	VAX	ETX	06/91
47706460	7YAGPP	D65	VAX	ETX	09/89
47706470	7YACQ8	D64	VAX	ETX	09/89
47706480	7Y9ELR	D63	VAX	ETX	09/89

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47706490	7Y8GM9	D62	VAX	ETX	09/89
47706500	7Y8CHY	D56	VAX	ETX	09/89
47706510	7Y7FCH	D55	VAX	ETX	09/89
47706520	7Y6HD5	D54	VAX	ETX	09/89
47706530	7Y6D9O	D53	VAX	ETX	09/89
47706540	7XBFAD	D52	VAX	ETX	09/89
47706560	7XAE0W	D45	VAX	HYB	05/91
47706570	7X9G1L	D44	VAX	HYB	05/91
47706580	7X9C2F	D43	VAX	ETX	05/91
47706590	7X8E3A	D42	VAX	ETX	05/91
47706600	7X7G45	D36	VAX	ETX	05/91
47706610	7X7C55	D35	VAX	ETX	05/91
47706620	7X69VU	D34	VAX	HYB	05/91
47706630	7WBBWV	D33	VAX	HYB	05/91
47706640	7WB7XV	D32	VAX	ETX	05/91
47706650	7WA9YW	D26	VAX	ETX	05/91
47706660	7W9BZX	D25	VAX	ETX	05/91
47706670	7W9E03	D24	VAX	ETX	05/91
47706680	7W8G14	D23	VAX	ETX	05/91
47706690	7W8C2B	D22	VAX	ETX	05/91
47706700	7W7E3H	D16	VAX	ETX	05/91
47706710	7W6G5I	D15	VAX	ETX	05/91
47706720	7W6D0V	D14	VAX	ETX	05/91
47706730	7VBF71	D13	VAX	ETX	05/91
47706740	7VAH8E	D12	VAX	ETX	05/91
47706750	7VAD9R	DZ6	VAX	HYB	05/91
47706760	7V9FG4	DZ5	VAX	ETX	05/91
47706770	7V8HHG	DZ4	VAX	ETX	05/91

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47706780	7V8ECZ	DZ3	VAX	ETX	05/91
47706790	7V7GK6	DZ2	VAX	ETX	05/91
47706800	7V7CLO	DX6	VAX	HYB	05/91
47706810	7V6ES7	DX5	VAX	ETX	05/91
47706820	7UBGTQ	DX4	VAX	ETX	05/91
47706830	7UBDUE	DX3	VAX	ETX	05/91
47756450	7YBVTs	C6G	VAX	ETX	09/89
47756460	7YAYO5	C6F	VAX	ETX	09/89
47756470	7YAUkI	C6D	VAX	ETX	09/89
47756480	7Y9WL1	C6C	VAX	ETX	09/89
47756490	7Y8YGJ	C6B	VAX	ETX	09/89
47756500	7Y8UH8	C5G	VAX	ETX	09/89
47756510	7Y7X6R	C5F	VAX	ETX	09/89
47756520	7Y6Z7G	C5D	VAX	ETX	09/89
47756530	7Y6V85	C5C	VAX	ETX	09/89
47756570	7X9Y12	C4D	VAX	ETX	05/91
47756580	7X9OWR	C4C	VAX	HYB	05/91
47756590	7X8QXL	C4B	VAX	ETX	05/91
47756600	7X7SYM	C3G	VAX	ETX	05/91
47756610	7X7OZH	C3F	VAX	ETX	05/91
47756620	7X6RVC	C3D	VAX	ETX	05/91
47756630	7WBTW7	C3C	VAX	ETX	05/91
47756640	7WBPX7	C3B	VAX	ETX	05/91
47756650	7WARY8	C2G	VAX	ETX	05/91
47756660	7W9TZF	C2F	VAX	HYB	05/91
47756670	7W9QUG	C2D	VAX	ETX	05/91
47756680	7W8SVN	C2C	VAX	ETX	05/91
47756690	7W8OWN	C2B	VAX	ETX	05/91

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47756700	7W7QYO	C1G	VAX	ETX	05/91
47756710	7W6Y51	C1F	VAX	HYB	05/91
47756720	7W6V08	C1D	VAX	HYB	05/91
47756730	7VBX1L	C1C	VAX	ETX	05/91
47756740	7VAZ2R	C1B	VAX	HYB	05/91
47756750	7VAV94	CZG	VAX	ETX	05/91
47756760	7V9XAH	CZF	VAX	HYB	05/91
47756770	7V9U6O	CZD	VAX	ETX	05/91
47756780	7V8WD7	CZC	VAX	ETX	05/91
47756790	7V7YEJ	CZB	VAX	HYB	05/91
47756800	7V7UL2	CXG	VAX	ETX	05/91
47756810	7V6WML	CXF	VAX	ETX	05/91
47756820	7UBYT4	CXD	VAX	ETX	05/91
47756830	7UBVOT	CXC	VAX	ETX	05/91
47806450	7YHDT2	C6M	VAX	ETX	06/89
47806460	7YGGIE	C6L	VAX	ETX	06/89
47806470	7YGCDX	C6K	VAX	ETX	06/89
47806480	7YFEEG	C6J	VAX	ETX	06/89
47806490	7YEGF5	C6H	VAX	ETX	06/89
47806500	7YECBI	C5M	VAX	ETX	06/89
47806510	7YDF67	C5L	VAX	ETX	06/89
47806520	7YCH1Q	C5K	VAX	ETX	06/89
47806570	7XFAVD	C4K	VAX	ETX	05/91
47806580	7XF6W8	C4J	VAX	HYB	05/91
47806590	7XE8X3	C4H	VAX	ETX	05/91
47806600	7XDASY	C3M	VAX	HYB	05/91
47806610	7XD6TT	C3L	VAX	ETX	05/91
47806620	7XC9OT	C3K	VAX	ETX	05/91

TABLE C-1: ETB MAP FILE INFORMATION

ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47806630	7WHBQI	C3J	VAX	ETX	05/91
47806640	7WH7RJ	C3H	VAX	ETX	05/91
47806650	7WG9SK	C2M	VAX	HYB	05/91
47806660	7WFBTR	C2L	VAX	ETX	05/91
47806670	7WF8OS	C2K	VAX	ETX	05/91
47806680	7WEAPZ	C2J	VAX	HYB	05/91
47806690	7WE6X0	C2H	VAX	HYB	05/91
47806700	7WD8Y7	C1M	VAX	HYB	05/91
47806710	7WCAZE	C1L	VAX	HYB	05/91
47806720	7WC7UL	C1K	VAX	ETX	05/91
47806730	7VH9VY	C1J	VAX	ETX	05/91
47806740	7VGH25	C1H	VAX	ETX	05/91
47806750	7VGD4C	CZM	VAX	ETX	05/91
47806760	7VFF5P	CZL	VAX	ETX	05/91
47806770	7VFC67	CZK	VAX	ETX	05/91
47806780	7VEE7K	CZJ	VAX	HYB	05/91
47806790	7VDGE3	CZH	VAX	HYB	05/91
47806800	7VDCFG	CXM	VAX	ETX	05/91
47806810	7VCEGZ	CXL	VAX	ETX	05/91
47806820	7UHHIC	CXK	VAX	ETX	05/91
47806830	7UHDP1	CXJ	VAX	ETX	05/91
47856450	7YHVMH	C6S	VAX	ETX	06/89
47856460	7YGYCU	C6R	VAX	ETX	06/89
47856570	7XFSP0	C4Q	VAX	ETX	06/91
47856580	7XFOQJ	C4P	VAX	ETX	06/91
47856590	7XEQRE	C4N	VAX	HYB	06/91
47856600	7XDSS9	C3S	VAX	HYB	06/91
47856610	7XDOT4	C3R	VAX	ETX	06/91

TABLE C-1: ETB MAP FILE INFORMATION

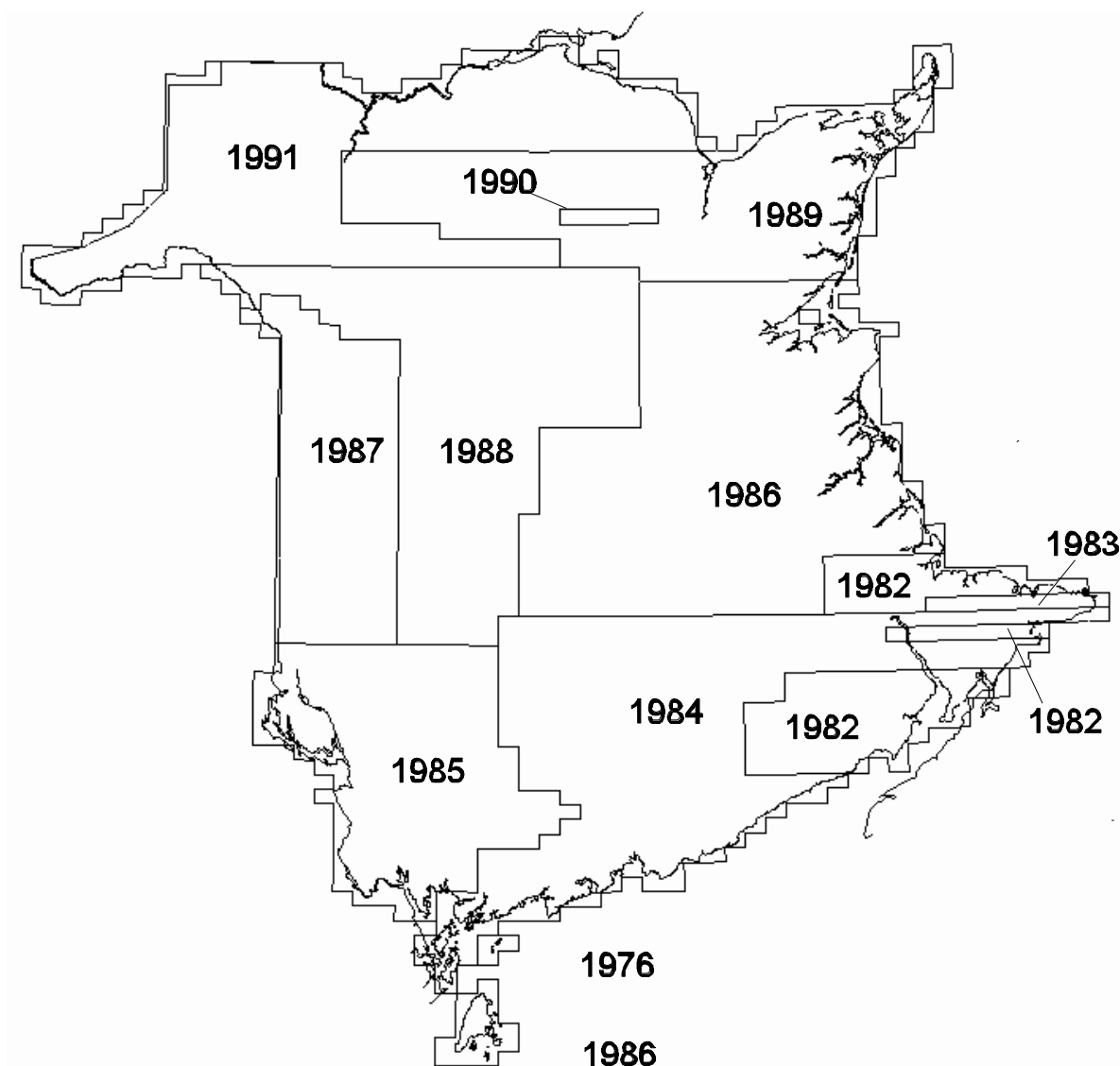
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47856620	7XCRO5	C3Q	VAX	HYB	06/91
47856630	7WHTQ0	C3P	VAX	ETX	06/91
47856640	7WHPR1	C3N	VAX	ETX	06/91
47856650	7WGRS2	C2S	VAX	ETX	06/91
47856660	7WFTT3	C2R	VAX	ETX	06/91
47856670	7WFQO4	C2Q	VAX	HYB	06/91
47856680	7WESQ6	C2P	VAX	HYB	06/91
47856690	7WEORD	C2N	VAX	HYB	06/91
47856700	7WDQSK	C1S	VAX	HYB	06/91
47856710	7WCSTR	C1R	VAX	ETX	06/91
47856720	7WCPOY	C1Q	VAX	HYB	06/91
47856730	7VHRVB	C1P	VAX	ETX	06/91
47856740	7VGTXI	C1N	VAX	ETX	06/91
47856750	7VGPYP	CZS	VAX	HYB	06/91
47856760	7VFX52	CZR	VAX	HYB	06/91
47856770	7VFU0L	CZQ	VAX	ETX	06/91
47856780	7VEW1Y	CZP	VAX	ETX	06/91
47856790	7VDY8H	CZN	VAX	ETX	06/91
47856800	7VDUAU	CXS	VAX	ETX	06/91
47856810	7VCWHD	CXR	VAX	ETX	06/91
47856820	7UHZCW	CXQ	VAX	ETX	06/91
47856830	7UHVJG	CXP	VAX	ETX	06/91
47906440	7YNHLD	C7T	VAX	ETX	06/89
47906450	7YNDGQ	C6Z	VAX	ETX	06/89
47906580	7XL6KU	C4V	VAX	ETX	06/91
47906590	7XK8LP	C4T	VAX	ETX	06/91
47906600	7XJAMK	C3Z	VAX	ETX	06/91
47906610	7XJ6NM	C3X	VAX	ETX	06/91

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47906620	7XI9IH	C3W	VAX	ETX	06/91
47906630	7WNBKC	C3V	VAX	ETX	06/91
47906640	7WN7LD	C3T	VAX	HYB	06/91
47906650	7WM9ME	C2Z	VAX	ETX	06/91
47906660	7WLBNG	C2X	VAX	HYB	06/91
47906670	7WL8IN	C2W	VAX	HYB	06/91
47906680	7WKAKI	C2V	VAX	HYB	06/91
47906690	7WK6LP	C2T	VAX	HYB	06/91
47906700	7WJ8MW	C1Z	VAX	ETX	06/91
47906710	7WIAT4	C1X	VAX	HYB	06/91
47906740	7VMBRV	C1T	VAX	ETX	06/91
47906750	7VM7Y8	CZZ	VAX	HYB	06/91
47906760	7VL9ZM	CZX	VAX	ETX	06/91
47906770	7VL6UZ	CZW	VAX	ETX	06/91
47906780	7VKE26	CZV	VAX	ETX	06/91
47906790	7VJG3P	CZT	VAX	HYB	06/91
47906800	7VJCA8	CXZ	VAX	ETX	06/91
47906810	7VIEBS	CXX	VAX	ETX	06/91
47906820	7UNHCB	CXW	VAX	ETX	06/91
47906830	7UNDEO	CXV	VAX	ETX	06/91
47956440	7YNZET	C72	VAX	ETX	06/89
47956450	7YNVG0	C66	VAX	ETX	06/89
47956610	7XJOHX	C35	VAX	HYB	06/91
47956620	7XIRCS	C34	VAX	HYB	06/91
47956630	7WNTEO	C33	VAX	ETX	06/91
47956640	7WNPFP	C32	VAX	ETX	06/91
47956650	7WMRGQ	C26	VAX	ETX	06/91
47956660	7WLTHS	C25	VAX	HYB	06/91

TABLE C-1: ETB MAP FILE INFORMATION					
ETB FILE NAME	OLD ETB FILE NAME	ETB GEOCODE	COMPILATION TYPE	PROCESSING LEVEL	DATE OF PHOTOGRAPHY
47956670	7WLQCZ	C24	VAX	HYB	06/91
47956680	7WKSEU	C23	VAX	HYB	06/91
47956690	7WKOL2	C22	VAX	HYB	06/91
47956750	7VMPSM	CZ6	VAX	ETX	06/91
47956760	7VLRTZ	CZ5	VAX	ETX	06/91
47956770	7VLOV6	CZ4	VAX	ETX	06/91
47956780	7VKQWK	CZ3	VAX	ETX	06/91
47956790	7VJY33	CZ2	VAX	HYB	06/91
47956800	7VJU4M	CX6	VAX	HYB	06/91
47956810	7VIX60	CX5	VAX	ETX	06/91
48006440	7YTHE2	B7B	VAX	ETX	06/89
48006450	7YTD9F	B6G	VAX	ETX	06/89
48006610	7XP6H9	B3F	VAX	ETX	06/91
48006620	7XO9C4	B3D	VAX	ETX	06/91
48006630	7WTBE0	B3C	VAX	ETX	06/91
48006640	7WT7F1	B3B	VAX	HYB	06/91
48006650	7WS9G3	B2G	VAX	HYB	06/91
48006660	7WRBH4	B2F	VAX	HYB	06/91
48006670	7WR8CB	B2D	VAX	HYB	06/91
48006680	7WQAED	B2C	VAX	ETX	06/91
48056630	7WTT7H	B3J	VAX	HYB	06/91
48056640	7WTP9D	B3H	VAX	ETX	06/91

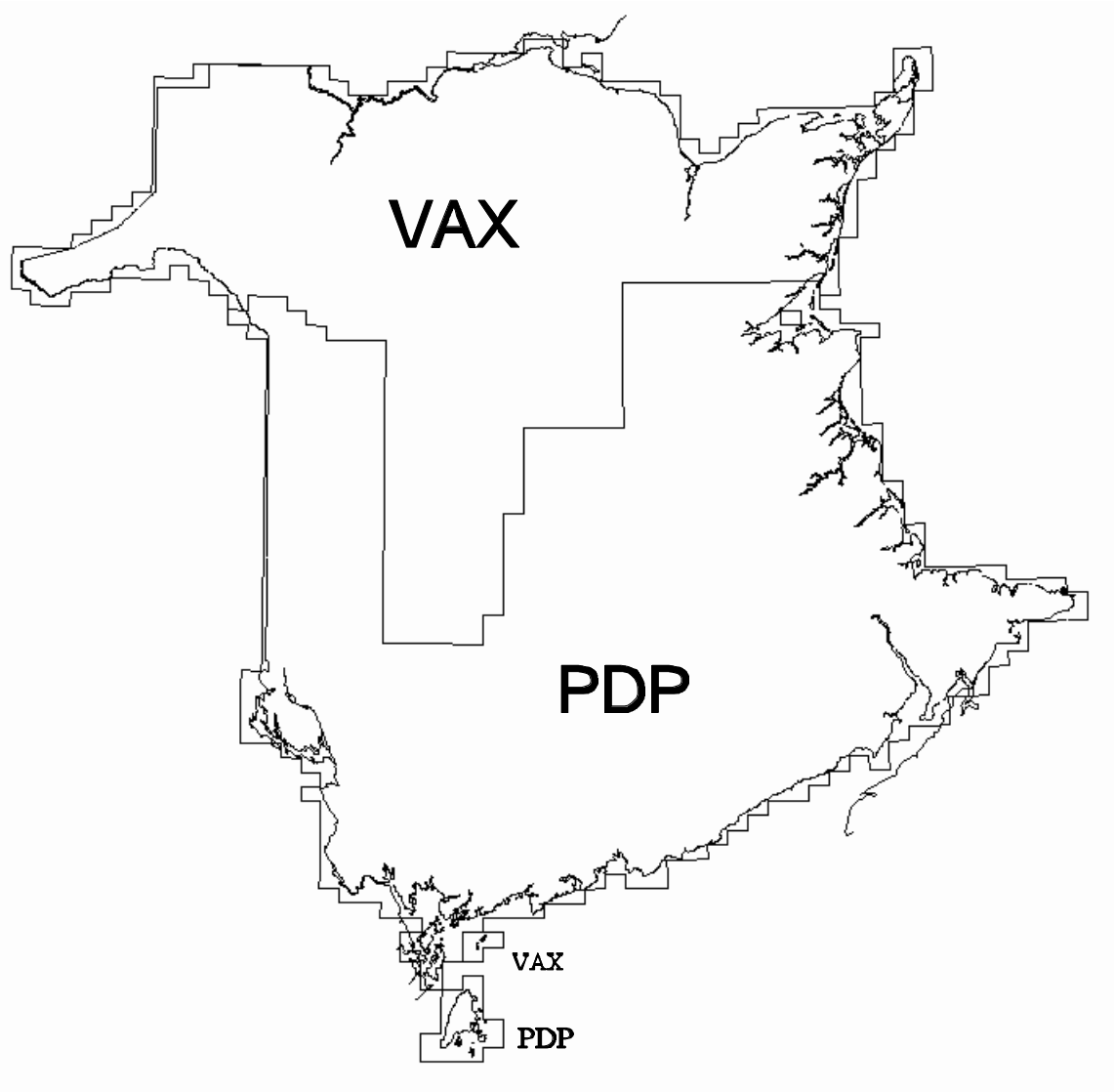
APPENDIX D Dates of Photography

This Appendix shows the dates of photography used for the compilation of the ETB Data Base files on a provincial map overlay.



APPENDIX E PDP and VAX Compilation Areas

This Appendix shows the areas which were compiled using PDP and VAX methods on a provincial map overlay.



APPENDIX F Sample ETB Map File CARIS Header

This appendix contains the listing for a representative ETB Map File CARIS header. Note that the information contained in Item 20 (Graphic extent) and Item 21 (Neat line corners) will vary depending upon the specific map sheet window selected. The Map File for which this information was generated (46006690) is the file used as the basis for the figures within Section 4 of the Guide.

Header in: C:\CAM\GEOPLAN\46006690,
11:46:55

Date: 12-Jul-1996

===== Header=====

1. Title New Brunswick Digital Topographic Database,ETB96			
2. File ID	46006690	3. Horizontal coord system	NEMR
4. Header length	198	5. Vertical coord system	MR
6. Descriptor length	16	7. Sounding, Spot Ht units	MR,M1
8. Coordinate resolutions		9. Coordinate shifts	
XY	1.0000000000	X	0.0000000000
		Y	0.0000000000
Z	0.1000000000	Z	0.0000000000
10. Projection	ST	11. Central meridian	66-30-00.000W
12. Scale	10000.00	13. Scaling lat 1	46-30-00.000N
14. Scaling factor	0.999912	15. Scaling Lat 2	N/A
16. Ellipsoid	AT77	17. Vertical datum	MSL
18. N/A		19. N/A	
20. Graphic extent (260607,743035,271541,750670) (system)			
21. Neatline corners (metres)		21. Neatline corners Lat,Long	
E=	261271.000 N= 744549.000	46-00-00.015N	67-00-00.008W
E=	269017.000 N= 744505.000	46-00-00.014N	66-53-59.995W
E=	269045.000 N= 750062.000	46-03-00.008N	66-53-59.997W
E=	261306.000 N= 750106.000	46-03-00.011N	67-00-00.010W
22. Format ID	5	23. Last edited	8-JUL-1996 14:35
24. False North	800000.000	25. False East	300000.000

APPENDIX G Assignment of Index Keys to Ramps

The information within this Appendix has been adopted from the ETB Data Base Technical Specifications Version 3.3 (NBGIC Document Number TSM010C.3_3), Appendix 26. Minor changes in wording have been made to clarify the procedures used.

Assigning NBDOT Index Keys for Ramps

A ramp consists of a primary route with a secondary route, even if it consists of several arcs or line segments. The main ramp is always determined using the right hand rule. After leaving the route, the primary ramp is determined by always staying to the right until reaching the intersecting route. Any ramp deviation from this primary ramp is assigned a new index key.

All ramps within the NBDOT Road Inventory Data Base source files were identified as linear features having keys beginning with the letter "I".

All ramps will be identified in the ETB Map Files as features with a key described as follows:

Iggggggqn

where:	I	is the ramp identifier
	gggggg	is the 6 character interchange geocode identifier
	q	is the interchange quadrant, and
	n	is a sequential number, unique to the quadrant

Ramp Identifier (I)

This is one character unique identifier used for all ramps in the province.

Interchange Geocode Identifier (gggggg)

This is a 6 character geocode, as defined in Chapter 4 of the Land and Water Information Standards Manual (LWISM).

Example from the LWISM: M2RQDH (37 m resolution)

NBDOT has provided NBGIC with software to generate Interchange Geocode identifiers. NBGIC has provided the software and any associated documentation to the production contractor, for their use.

Interchange Quadrant (q)

This is a quadrant which is determined by first identifying the primary route (lowest number i.e., Assuming that the routes are Route 2 & 11, the primary route is 2) and cardinal direction (the direction of increasing Control Sections). The Quadrants are then numbered 1 to 4 clockwise from the top right quadrant of the interchange (see Figure G-1 below).

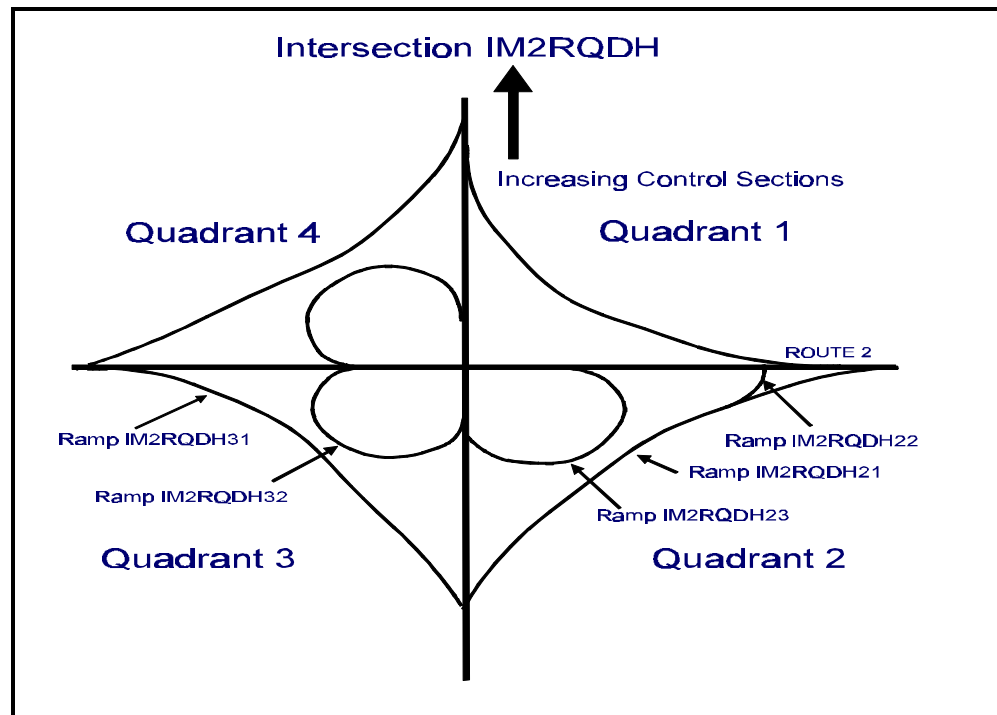


Figure G-1: Ramp Key Assignment Example

NOTE: In the cases where the interchange geometry does not permit a clear identification of quadrants, there will be no quadrant identifier. All ramps in the interchange will be given a sequential number starting with 01, 02, etc.

Sequential Number (n)

This is a sequential number, starting at 1 for each quadrant.

Example of Ramp Index Key: IM2RQDH23

Determination of Interchange Geocodes

The intersection of the two routes should be considered the point at which the geocode is determined for the interchange.

Ramp Feature Codes

The feature code for all ramps will be RRRDRAMP.

Rules for Maintaining Index Keys

1. If a new segment requiring an Index Key is added, the next sequential number is used.
2. If an existing Indexed segment is sub-divided, the old Index Key is retired and new ones are assigned using the next available sequential numbers.

APPENDIX H Feature Codes Used to Define Areas Of Exclusion in Digital Terrain Model Files

The following is a list of feature codes for Digital Topographic Data which form the boundaries of areas excluded from the collection of DTM points.

Area Type Water Features

WACA	CANAL
WACA04	CANAL RUIN/INTACT./ABAND.
WACO10	COASTLINE WATER LEFT
WACO20	COASTLINE WATER RIGHT
WALK10	LAKE LEFT
WALK20	LAKE RIGHT
WARS10	RESERVOIR LEFT
WARS20	RESERVOIR RIGHT
WARVDL	STREAM DOUBLE LINE
WARVDL10	STREAM DOUBLE LINE LEFT
WARVDL15	STREAM DOUBLE LINE LEFT INDEFINITE
WARVDL20	STREAM DOUBLE LINE RIGHT
WARVDL25	STREAM DOUBLE LINE RIGHT INDEFINITE
WARVLK10	RIVER LAKE LEFT
WARVLK20	RIVER LAKE RIGHT

Water Structures

STWH	WHARF
STWH03	WHARF UNDER CONSTRUCTION
STWH04	WHARF RUIN
SAPO	POOL (LARGE)
UTSPOL	SEWAGE SETTLEMENT POND
WABW	BREAKWATER
WABW03	BREAKWATER UNDER CONSTRUCTION
WADM	DAM (MANMADE)

Land Structures

STRW RETAINING WALL

Land Areas

DADP DISPOSAL PILE CENTROID
DADP10 DISPOSAL PILE LEFT
DADP20 DISPOSAL PILE RIGHT

DADU DUMP CENTROID
DADU10 DUMP LEFT
DADU20 DUMP RIGHT

DALF LANDFILL SITE CENTROID
DALF10 LANDFILL SITE LEFT
DALF20 LANDFILL SITE RIGHT

DAMN MINE/OPEN PIT CENTROID
DAMN10 MINE/OPEN PIT LEFT
DAMN20 MINE/OPEN PIT RIGHT

DAPI PILE AREA CENTROID
DAPI10 PILE AREA LEFT
DAPI20 PILE AREA RIGHT

DAPT PIT CENTROID
DAPT10 PIT LEFT
DAPT20 PIT RIGHT

DAQU QUARRY CENTROID
DAQU10 QUARRY LEFT
DAQU20 QUARRY RIGHT

DAUC CONSTRUCTION AREA CENTROID
DAUC10 CONSTRUCTION AREA LEFT
DAUC20 CONSTRUCTION AREA RIGHT

Transportation Structures

RRBR BRIDGE
RRBR03 BRIDGE UNDER CONSTRUCTION
RRBR04 BRIDGE RUIN
RROP OVERPASS (ROAD/RAIL ROAD)

NOTE:

In cases where exclusion areas do not form closed polygons, other features may have been used to close them. Features which may be used to close polygons in this manner are:

DLBNIN	BOUNDARY INTERNATIONAL
DLBNPR	BOUNDARY PROVINCIAL
DLNLIN	NEAT LINE
WARVIS10	STREAM ISLAND LEFT
WARVIS15	STREAM ISLAND LEFT INDEFINITE
WARVIS20	STREAM ISLAND RIGHT
WARVIS25	STREAM ISLAND RIGHT INDEFINITE

All features beginning with

DA	DESIGNATED AREAS
LC	LAND COVER
RRRD	TRANSPORTATION FEATURES